SUPPLEMENT.

The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[*The* MINING JOURNAL *is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.*]

No. 2415.—VOL. LI. LONDON, SATURDAY, DECEMBER 3, 1881. PRICE (WITH THE JOURNAL) SIXPENCE PER ANNUM, BY POST, £1 4s.

HODGSON & STEAD'S machines have been awarded PRIZE MEDALS wherever exhibited

WEIGHING MACHINERY

for all Commercial purposes

HODGSON & STEAD LD

Egerton Iron Works SALFORD

MANCHESTER

ESTD 1852

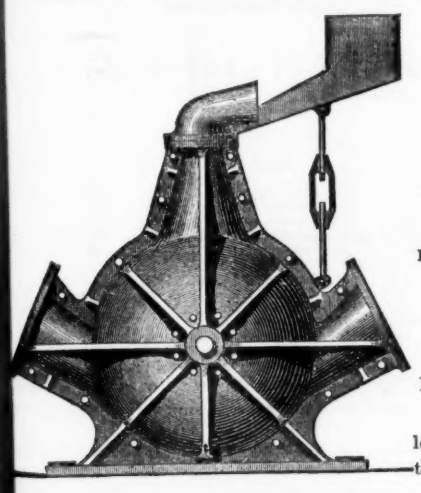
JORDAN'S PULVERISING PATENT MACHINE,

FOR REDUCING

MINERALS, CHEMICALS, CEMENTS, CEREALS, &c.

T. B. JORDAN AND SON,

52, GRACECHURCH STREET, LONDON.



SIMPLE.
DURABLE.
EFFECTIVE

OTHER SPECIALITIES.
GOLD REDUCING PLANT.
HAND-POWER ROCK DRILLS
GENERAL MINING PLANT.

Illustrated Catalogues on application.

THE BEST METAL FOR BUSHES, BEARINGS, SLIDE VALVES,

and other wearing parts of Machinery.

PUMPS, PLUNGERS, CYLINDERS, &c.

PHOSPHOR BRONZE WIRE, TUBES, SHEET, RODS TOOLS, &c.

STEAM FITTINGS.

REGISTERED TRADE MARK "PHOSPHOR BRONZE"

SOLE MANUFACTURERS UNDER PATENTS.

THE PHOSPHOR BRONZE COMPANY, LIMITED,

SUMNER STREET, SOUTHWARK, LONDON, S.E.

ELLIS LEVER AND CO.,

LATTICE CLOTH MANUFACTURERS,

WEST GORTON WORKS,

MANCHESTER.

ESTABLISHED A QUARTER OF A CENTURY.

PATENT

"INGERSOLL ROCK DRILL."

MEDAL AND HIGHEST AWARDS.

1872—American Institute.
1873—Ditto.
1874 — London International.
1875—Manchester.
1875—Leeds.
1875—Cornwall.
1875—Rio de Janeiro.
1876—Australia.
1876—Philadelphia.
1877—Cornwall.
1877—Mining Institute.
1878—Paris.



We claim 40 per cent. greater effective drilling power.

LE GROS, MAYNE, LEAVER, & CO., 60, Queen Victoria Street, London, E.C.,

SOLE AGENTS FOR THE

DUSSELDORF WROUGHT IRON STEAM TUBE WORKS.

TUBES FOR BOLERS, PERKINS'S, and other HOT-WATER SYSTSEM

For Catalogues of Rock Drills, Air Compressors, Steel or Iron Steam Tubing, Boiler Tubes, Perkins's Tubes, Pneumatic Tubes, and all kinds of Machinery and MINING PLANT, apply to—

60, QUEEN VICTORIA STREET, E.C.

NORMANDY ROCK DRILL.
NORMANDY AIR COMPRESSOR.

THESE PATENT MACHINES ARE VALVELESS.

RESULTS OF TRIALS at CARDIFF EXHIBITION, on a block of Cornish Granite, on 24th September, 1881:—

	Inches.	min.	sec.
Normandy Rock Drill and Air Compressor, bored	$1\frac{7}{16} \times 10\frac{1}{2}$ in	2	10
Eclipse Rock Drill and Reliance Air Compressor	$1\frac{3}{8} \times 10\frac{1}{2}$ in	2	25
Beaumont Rock Drill and Sturgeon's Trunk Air Compressor	$1\frac{1}{2} \times 7\frac{1}{2}$ in	2	30

Normandy's have WON TWO GOLD MEDALS at the Melbourne Exhibition, 1880, and being the simplest, ARE MUCH THE CHEAPEST in first cost and in repairs.

A. NORMANDY, STILWELL, & CO.,

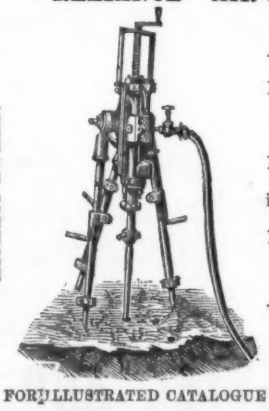
OPPOSITE CUSTOM HOUSE STATION,

VICTORIA DOCKS, LONDON, E.

THE PATENT

"ECLIPSE" ROCK-DRILL AND "RELIANCE" AIR-COMPRESSOR

SILVER MEDEL—PARIS, 1878—HIGHEST AWARD.



Are NOW SUPPLIED to the ENGLISH, FOREIGN, and COLONIAL GOVERNMENTS, and are also IN USE in a nnmber of the largest MINES, RAILWAYS, QUARRIES, and HARBOUR WORKS in GREAT BRITAIN and ABROAD.

FOR ILLUSTRATED CATALOGUE AND PRICES apply to—

HATHORN & CO., 22, Charing Cross, London, S.W.

"Kainotomon" Rock Drill

SELECTED BY THE

BRITISH, PERUVIAN, & SAXON GOVERNMENTS.



SUPERIOR AIR COMPRESSORS.

T. A. WARRINGTON,

30, King-street, Cheapside, London.

The Barrow Rock Drill COMPANY

SUPPLY their CELEBRATED ROCK DRILLS, AIR COMPRESSORS, &c., and all NECESSARY APPLIANCES for working the said Drills.

Their DRILLS have most satisfactorily stood the TEST of LONG and CONTINUOUS WORK in the HARDEST KNOWN ROCK in numerous mines in Great Britain and other countries, clearly proving their DURABILITY and POWER.

The DRILLS are exceedingly STRONG, LIGHT, SIMPLE, and adapted for ends, stopes, quarries, and the sinking of shafts. They can be worked by any miner.

For PRICES, Particulars and Reports of Successful and Economical Working, apply to—

LOAM AND SON,

LISKEARD, CORNWALL.

ASBESTOS.

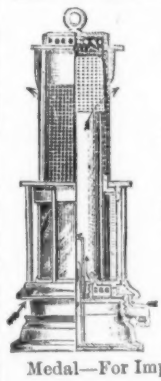
ASBESTOS ENGINE PACKING,
ASBESTOS MILLBOARD JOINTING
ASBESTOS BOILER COVERING
ASBESTOS CEMENT,

ARE UNRIVALLED.

Price Lists and all information from the UNITED ASBESTOS COMPANY (LIMITED):—

HEAD OFFICES: 161, QUEEN VICTORIA STREET, LONDON,

WORKS:—ROME, TURIN, AND GLASGOW.



ESTABLISHED 1820.

JOSH. COOKE AND CO,

SAFETY LAMP AND GAUZE MANUFACTORY, TRADE MARK J C & E

Honourable Mention, Paris Exhibition, 1878.

Illustrated Price Lists free, by post or otherwise.

MIDLAND DAVY LAMP WORKS,

Belmont Passage, 203, Lawley-street,

BIRMINGHAM.

Makers of Williamson's Double Safety Lamp,

Williamson's Patent Double Safety Lamp shown half in section.

Medal—For Improved Invention—London, Kensington, 1874.

Ditto —Excellence of Workmanship—Wrexham, 1876.

ROCK DRILLS AND AIR COMPRESSORS

WARSOP AND HILL, ENGINEERS, NOTTINGHAM,

ARE PREPARED TO CONTRACT FOR

DRIVING LEVELS or SINKING SHAFTS, &c., by machinery with all the recent improvements to ensure rapid advance; or to SUPPLY and FIX PLANTS, complete.

STEAM CAPSTANS AND UNDERGROUND HAULAGE A SPECIALITY.

FIRST AWARD
SYDNEY. 1879.

BICKFORD'S PATENT FUSES

FIRST AWARD
MELBOURNE, 1881.



SILVER MEDAL OF THE MINING INSTITUTE OF CORNWALL, TRURO, 1880,
for an Improved Method of Simultaneous Blasting.

FOR SIMULTANEOUS BLASTING.

BICKFORD, SMITH AND CO,

THE INVENTORS, AND ORIGINAL PATENTEES AND MANUFACTURERS OF

SAFETY AND INSTANTANEOUS FUSES AND IGNITERS

FOR USE IN ALL BLASTING OPERATIONS AND SPECIALLY PREPARED FOR ANY CLIMATE

Note the TRADE MARK: Two Separate threads through centre of Fuse.

BICKFORD, SMITH AND CO.'S Patent Igniters and Instantaneous Fuses for simultaneous blasting are being extensively used at home and abroad. This improved method is the cheapest, simplest, and most dependable ever introduced for simultaneously firing any number of charges. For full particulars, see Descriptive Catalogue.

PRICE LISTS, DESCRIPTIVE CATALOGUES, AND SAMPLES TO BE HAD ON APPLICATION.

FACTORIES—TUCKINGMILL CORNWALL; AND ST. HELENS JUNCTION, LANCASHIRE.
HEAD OFFICE—TUCKINGMILL, CORNWALL.
LANCASHIRE OFFICE—ADELPHI BANK CHAMBERS, SOUTH JOHN STREET, LIVERPOOL
LONDON OFFICE—85, GRACECHURCH STREET, E.C.

Every package bears Bickford, Smith, and Co.'s copyright label.

The Compound Differential

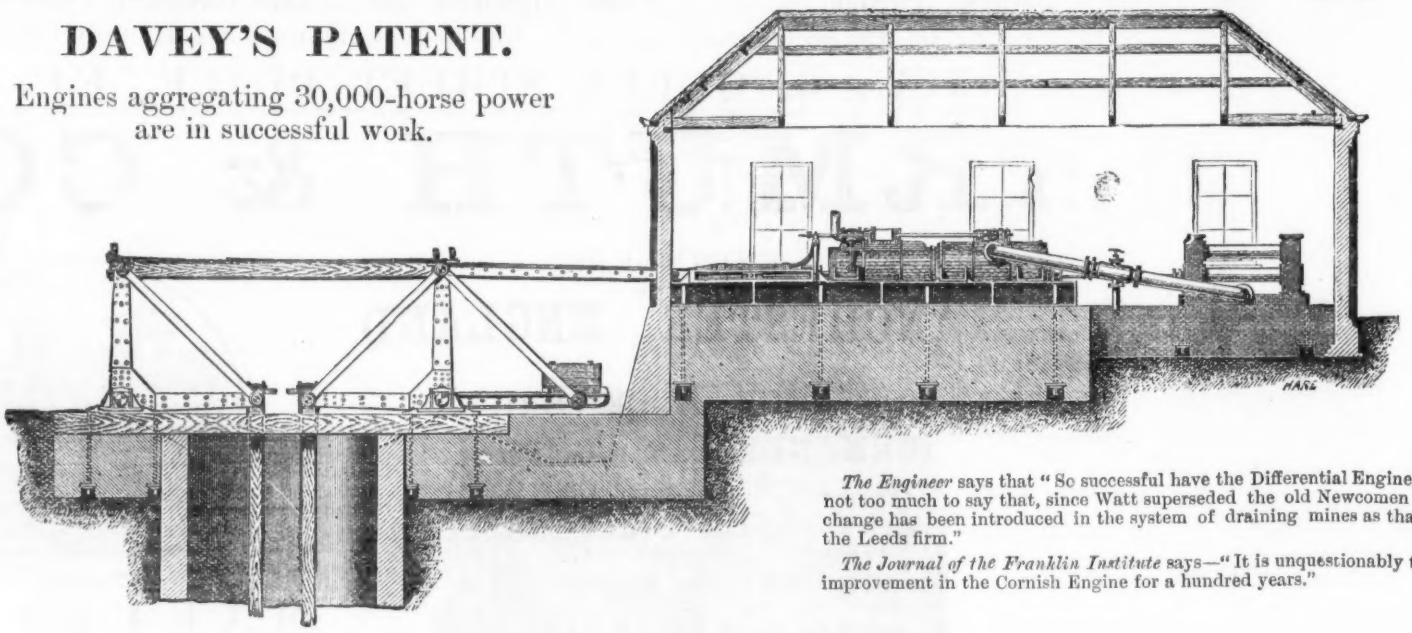
PUMPING ENGINE

Mining Machinery.

WINDING ENGINES, AIR COMPRESSORS, MAN ENGINES, CAPSTANS, STAMPS, CRUSHERS, &c., &c.

DAVEY'S PATENT.

Engines aggregating 30,000-horse power are in successful work.



Winding Engines, &c.

The Engineer says that "So successful have the Differential Engines been, that it is not too much to say that, since Watt superseded the old Newcomen engine, no such change has been introduced in the system of draining mines as that introduced by the Leeds firm."

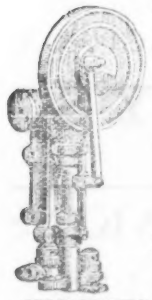
The Journal of the Franklin Institute says—"It is unquestionably the most arked improvement in the Cornish Engine for a hundred years."

CATALOGUES ON APPLICATION.

HATHORN, DAVEY, AND CO., LEEDS.

ALEX. WILSON & CO.,

VAUXHALL IRONWORKS.
LONDON, S.W.,
MANUFACTURERS OF



THE VAUXHALL DONKEY PUMPS.
THE EXCELSIOR DIRECT-ACTING PUMPS.
Air Compressors.
Winding Engines.
HOISTING MACHINERY.

ILLUSTRATED AND PRICED CATALOGUES ON APPLICATION.

CAPTAIN ABSALOM FRANCIS, M.E.
GOGINAN, ABERYSTWITH

AMERICAN MINES.—An accurate and comprehensive record of the Gold and Silver Mining industry of the United States may be found every week in "THE MINING REVIEW,"
Published every Saturday, at Chicago, U.S.A. Subscription price, including postage, 16s. per annum.
Address, "The Mining Review Company," 116, Monroe-street, Chicago

SAMUEL OSBORN AND CO.,

MANUFACTURERS OF TOUGHENED

CRUCIBLE STEEL CASTINGS

Of all descriptions of special strength and solidity.

ALSO, MANUFACTURERS OF

BEST CAST STEEL FOR ENGINEERS' AND MINERS' PURPOSES; FILES; SAWS; HAMMERS; RAILWAY SPRINGS, &c.
STEEL SHEETS AND FORGINGS.

SOLE MAKERS OF

"R. Mushet's Special Steel," for Lathe and Planing Tools and Drills.
THE STEEL WHICH REQUIRES NO HARDENING.
And R. Mushet's Celebrated Extra Best Welding Titanic Cast Steel for Borers.

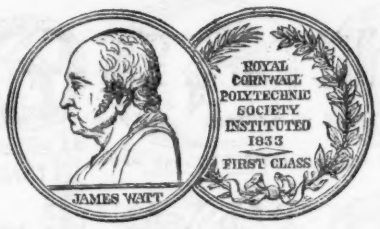
ADDRESS:—

CLYDE STEEL AND IRON WORKS, SHEFFIELD.

SANDYCROFT FOUNDRY AND ENGINE-WORKS CO. (LIMITED), CHESTER.

SPECIALITY MINING MACHINERY.

ESTABLISHED 1838.



PUMPING & WINDING ENGINES.

AIR COMPRESSORS AND ROCK DRILLS.

PITWORK.

Crushing Mills & Stone Breakers.

DRESSING MACHINERY.

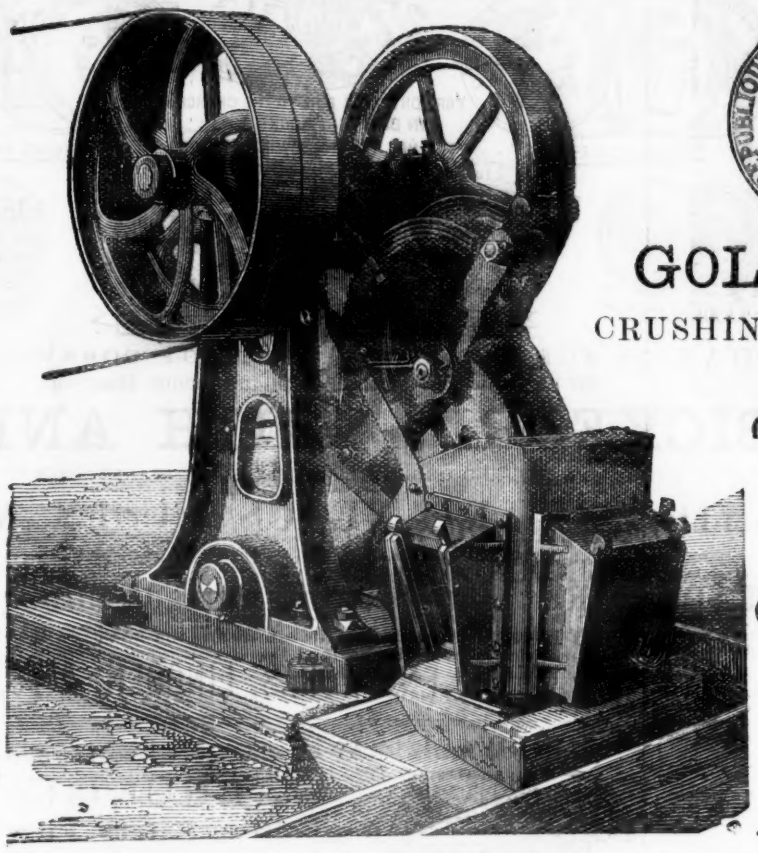
BOILERS.

WATER-WHEELS.

FORGINGS.

MINING TOOLS.

AND STORES OF ALL KINDS.





GOLD & SILVER

CRUSHING AND AMALGAMATING MACHINERY.

Californian or Gravitation

STAMPS

OF ANY SIZE OR PATTERN

PANS.

Concentrators & Separators.

BUDDLES.

RETORTS.

SIEVING & BLANKETS.

Amalgamated Copper Plates

PATTERSON'S PATENT ELEPHANT ORE STAMPS.

IN USE IN CORNWALL, CALIFORNIA, BRAZIL, AUSTRALIA, AFRICA, AND INDIA. THE BEST MACHINE FOR PULVERISING

GOLD QUARTZ,

And other hard and refractory Materials. Particularly designed and adapted for transmission Abroad, and for Countries where Transport is a difficulty. Quickly and economically erected. Can be seen stamping Quartz near London.

LONDON OFFICE: 6, QUEEN STREET PLACE, E.C.

T. LARMUTH & CO.,

ENGINEERS,

MANCHESTER, ENGLAND.



SOLE MAKERS OF

McCULLOCH'S

PATENT ROCK DRILL CARRIAGE

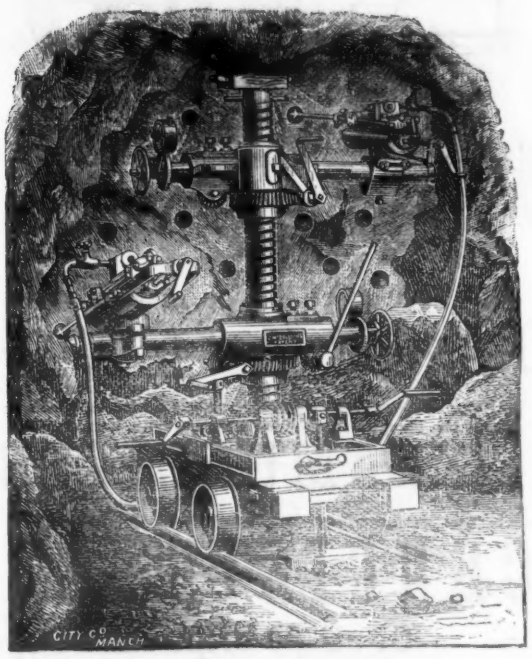
STEAM CRANES, OVERHEAD TRAVELLERS,
ENDLESS CHAIN ELEVATORS, AND FEED SHEETS,
TRAVERSERS AND TURNTABLES,

Engineers' Tools of every description.

LLOYD'S FANS,

MINE VENTILATING FANS,

CENTRIFUGAL PUMPS.





MAKERS OF

STURGEON'S NEW

PATENT TRUNK AIR COMPRESSOR

WINDING AND PUMPING ENGINES,

IMPROVED CONDENSING AND NON-CONDENSING HIGH-PRESSURE

STEAM ENGINES,

With Ordinary or Expansion Valves, Compounded on Non-Compounded.

SPECIALITIES FOR

LEATHER BELTING MANUFACTURERS

SHAFTING, GEARING, AND PULLEYS.

Sole Makers of J. Priestman and Son's Patent Leather Striking Machines.

British and Foreign Safety Fuse Company,



REDRUTH, CORNWALL,

MANUFACTURERS OF

SAFETY FUSE,

FOR MINING AND QUARRYING PURPOSES.

PRICES ON APPLICATION

FRANCIS AND JENKINS,

GREENFIELD WORKS,

LLANELLY, S. WALES,

MANUFACTURERS OF THE

Improved Solid Steel Shovels, C. S. Forks, Solid Steel Miners' Shovels, Railway and Miners' Picks,

Steel-pointed Spades and Shovels, Draining and Grafting Tools, &c.

ALSO MANUFACTURERS OF

COPPER WORKS' LADLES

To which special attention is given.

RABBLE HEADS, PADDLES, AND EVERY DESCRIPTION OF LIGHT HAMMERED WORK.

"ROOT"

PATENT TUBULOUS STEAM BOILER

SAFE. ECONOMICAL. EASY TRANSPORT IN MOUNTAINOUS COUNTRIES.

KNAPS PATENT MECHANICAL STOKERS,

APPLICABLE TO ALL KIND OF BOILERS & FURNACES,—ECONOMICAL AND SMOKE CONSUMING.

THE PATENT STEAM BOILER COMPANY.
HENEAGE STREET.
BIRMINGHAM.

JOSEPH FIRTH AND SONS'

New Patent Brick-making Machine,

Embraces the following advantages—viz.:

Implicity, strength, and durability. Compactness and excellence of mechanica arrangements, large producing capabilities, moderate cost.

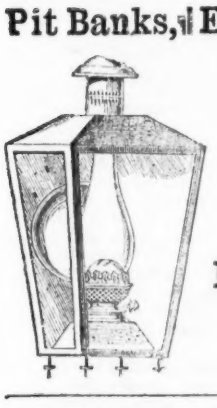
It makes two bricks at once, and will make 2,000 to 14,000 plastic pressed bricks per day, hard enough to go direct to the kiln without drying; or it will make the bricks thoroughly plastic if required. For works requiring a machine at less cost the machine is made to turn out one brick at once, and is capable of producing 8000 bricks per day.

The Machine can be seen at work daily at the Brickworks of the Patentees, JOSEPH FIRTH AND SONS, WEBSTER HILL, DEWSBURY, and CROWBURY BRICK WORKS, SUSSEX; as also their Patent Gas Kiln for Burning Bricks, which possesses the following amongst other advantages, viz.:—Economy in Fuel, Rapidity and Quality of Work, even Distribution of Heat, and Total Consumption of Smoke.

PATENT DUPLEX LAMPS,

FOR COLLIERIES, IRONWORKS, &c.,
SUITABLE FOR

Pit Banks, Engine-Houses, &c., &c.



Each Lamp gives a light equal to 26 candles,

No breakage of Chimneys from Heat.

S. HOOPER,

CLOSE TO NEW STREET STATION,

Lower Temple Street,
BIRMINGHAM.

Illustrations on application.

INCREASED VALUE OF WATER-POWER.

MacADAM'S VARIABLE TURBINE.

This Wheel (which is now largely in use in England, Scotland, and Ireland) is the only one yet invented which gives proportionate power from both large and small quantities of water. It can be made for using a large winter supply, and yet work with equal efficiency through all variations of quantity down to a fifth, or even less if required. It is easily coupled to a steam-engine, and in this way always assists it by whatever amount of power the water is capable of giving, and therefore saves so much fuel.

This Turbine is applicable to all heights of fall. It works immersed in the tail-water, so that no part of the fall is lost, and the motion of the Wheel is no affected by floods or back-water.

References to places where it is at work will be given on application to—

MacADAM BROTHERS AND CO., BELFAST.

Just published.

COAL MINING PLANT.

By J. POVEY-HARPER, of Derby.

Comprising Working Drawings 2 ft. by 1 ft. 8 in., taken from actual practice, illustrative of Colliery Plant and the Working of Coal, &c.

Price bound, or loose sheets in portfolio, £2 5s.;
Or with the Designs for Workmen's Houses, £2 12s. 6d.

"A carefully and thoughtfully executed series of working drawings of coal mining plant. The work is of the utmost possible utility to students and mine managers, and for those undertaking to open out new collieries, whether in this country or abroad, no more complete guide could be desired."—*Mining Journal.*

"This is a very fine work, excellently got up, and well adapted for the purpose indicated. We strongly recommend the work on account of its extremely practical character to every colliery proprietor who may contemplate new erections or appliances in coal working, or who may be opening out new mineral property."—*Colliery Guardian.*

"We have no hesitation in saying that a more useful work of its kind has never come under our notice. Every detail and measurement are given, and we may fairly say that such an elaborate and useful work has not been issued in recent years, if at all."—*Coal and Iron Trades' Review.*

London: Published at the Mining Journal Office, No. 26, Fleet-street, E.C. Copies may be obtained by order of any bookseller, who can obtain them through their London agent.

TO PARENTS AND GUARDIANS.

AN ELIGIBLE OPPORTUNITY is now offered for the SETTLEMENT of an ACTIVE YOUNG GENTLEMAN IN CANADA. He will be enabled to obtain his profession as a Solicitor in five, or if he be a Graduate in three years. Cost of living about £150. In the meantime he will have active work, and obtain a knowledge of the Dominion, which is destined to become one of the most prosperous of the Colonies. Premium, £100 sterling.

HERBERT C. JONES,
32, Wellington-street, Toronto. Canada Land and Loan Agency.

CALIFORNIAN AND EUROPEAN AGENCY.

509, MONTGOMERY STREET, SAN FRANCISCO, CAL.
J. JACKSON, Manager

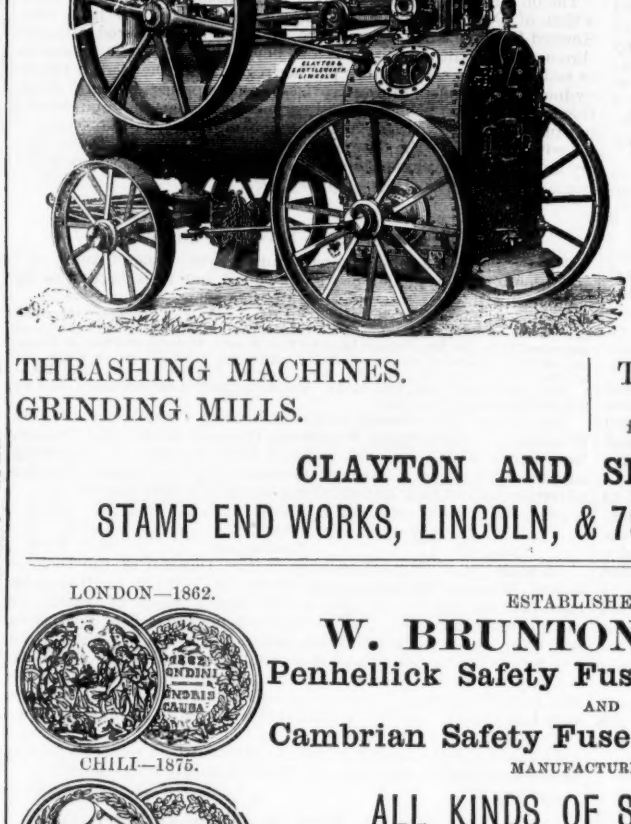
WHAT IS YOUR DISEASE—WHAT IS YOUR REMEDY?
GRATIS, free by post on receipt of Two Stamps to pay Postage.

THE BOOK OF POSITIVE REMEDIES.—It is the Book of Positive Medicine for the Cure of certain forms of Debility and Nervousness—viz: Mental and Physical Depression, Palpitation of the Heart, Noises in the Head and Ears, Impaired Sight and Memory, Indigestion, Pains in the Back, Headache, Piles, Constipation, Hysteria, Dizziness, Local Weakness, Muscular Relaxation, Nervous Irritability, Blushing, &c., resulting from Exhaustion of Nerve power, effect of Overwork, City Life, Worry, Brain Toil Intemperance, and other abuses of the system.

H. and H. Smith and Co., Positive Remedy Laboratory, 26, Southampton-row London, W.C.

1880-81.—MELBOURNE (AUSTRALIA) EXHIBITION.

Portable Engine—Gold Medal. Thrashing Machine—Gold Medal.



☞ *The Royal Agricultural Society of England have awarded Every First Prize to CLAYTON and SHUTTLEWORTH for Portable and other Steam Engines since* 1863, *and Prizes at every Meeting at which they have competed since* 1849.

GOLD MEDALS, AND OTHER PRIZES,

Have been awarded to CLAYTON AND SHUTTLEWORTH at the various International Exhibitions of all Nations, including

LONDON, 1851, 1862; PARIS, 1855, 1867, 1878; VIENNA, 1857, 1866, 1873;
for their

STEAM ENGINES, Portable and Fixed
(For Coals, Wood, Straw, and every description of Fuel.)

THRASHING MACHINES.
GRINDING MILLS.

TRACTION ENGINES, &c.

Catalogues in English and in all Continental Languages free on application.

CLAYTON AND SHUTTLEWORTH,

STAMP END WORKS, LINCOLN, & 78, LOMBARD STREET, LONDON.

LONDON—1862. CHILI—1875.

ESTABLISHED 1848.

W. BRUNTON AND CO.,

Penhellick Safety Fuse Works, Redruth,
AND
Cambrian Safety Fuse Works, Wrexham,
MANUFACTURERS OF

ALL KINDS OF SAFETY FUSE.

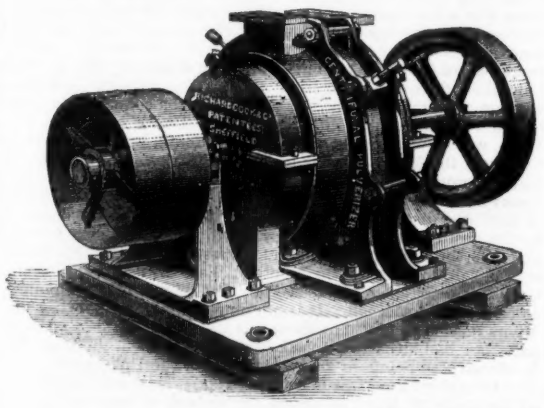
SILVER MEDAL (HIGHEST AWARD), MELBOURNE EXHIBITION, 1881, for
"EXCELLENCE OF MANUFACTURE."

PARIS—1878. MELBOURNE—1881.



LUCOPS'

Patent Centrifugal Pulveriser,



(Two tons per hour with 5 horse-power actual,)

For reducing to an impalpable powder, or to any requisite degree of fineness, all materials capable of being thus treated. CEMENT, CHEMICALS, GRAIN, COAL, COLOURS, PHOSPHATES, LIME, COPPER, TIN, ZINC, and other Ores with rapidity, completeness, and perfect uniformity.

THE ONLY GUARANTEED MACHINE FOR

GOLD QUARTZ.

This mill consists of a circular iron casing, the section being elliptical in form, and is fixed vertically on a firm bed or foundation plate, a shaft runs through the centre of the casing on which is keyed a series of arms, in the extremities of which revolve two or more slightly oblong iron rollers, which, when put in motion, fly off from the centre and run upon the interior periphery of the casing, and by centrifugal force crush and pulverise the article under treatment.

The effect produced by this system is most extraordinary in its practical results, the power required is small in consequence of the comparative absence of friction from the working parts of the mill, the combined results of the rolling action of the crushers and their impact by centrifugal force on the material, being the same in kind, but in degree far exceeding that of edge runners, the sides of the casing are formed as open wire sieves of the degree of fineness required, and a series of propelling blades attached to and revolving with the central shaft drive the material under treatment through the sieves as it is pulverised; by this arrangement the degree of fineness can with certainty be arrived at from coarse to extreme fine, and that with uniformity

Intending purchasers can at all times satisfy themselves by sending the material they wish to operate on, and seeing it pulverised. Over 300 in use. Prices and testimonials free on application.

RICHARD COOK & CO., ENGINEERS, SHEFFIELD.

MANCHESTER WIRE WORKS.



NEAR VICTORIA STATION, MANCHESTER.
(ESTABLISHED 1790).

JOHN STANIAR AND CO.,

Manufacturers by STEAM POWER of all kinds of Wire Web, EXTRA TREBLE STRONG for

LEAD AND COPPER MINES.

Jigger Bottoms and Cylinder Covers woven ANY WIDTH, in Iron, Steel, Brass, or Copper

EXTRA STRONG PERFORATED ZINC AND COPPER RIDDLES AND SIEVES



Shipping Orders Executed with the Greatest Dispatch.

Original Correspondence.

COPPER MINES OF CHILI.

SIR,—Some two months ago I acted on the suggestion contained in a letter which appeared in the Journal, and purchased 100 shares of the Panulcillo Copper Company at 5¼, cum dividend of 3s. 6d. The price of these shares is now 6 to 6¼. I have just realised my investment, and with the proceeds have bought 200 shares of 3*l.* in the Copiapo Mining Company. There are many points of resemblance between the two undertakings. For several years prior to 1880 neither company gave any return to its shareholders. Both companies after clearing off past deficits paid a small dividend for the financial year ending June, 1880. The Panulcillo Company for the year ending June, 1881, paid two half-yearly dividends of 4s. and 3s. 6d., together 7s. 6d., equal to 9*l.* 7s. 6d. per cent. on the capital of 20,000*l.*, carrying forward a small balance. The Copiapo Company for the same period has distributed four quarterly dividends of 1s. 6d., 1s., 1s., and 2s., together 5s. 6d., equal to 8*l.* 1s. 9d. on its capital of 161,700*l.*, carrying forward the large balance of 7712*l.*, equal to a further 4¾ per cent. The present price of the shares, 3*l.*, includes the last quarterly dividend of 2s. The position of the two companies is shown by the following table:—

Company.	Ordinary Capital.	Debentures.	Value of Shares. Par.	Value of Shares. Called up.	Dividend.	Market price.	Yield on present value.
Panulcillo	200,000	... 35,000	£4	£4	... £9 7 6	... £6	... £6 5 0
Copiapo...	161,670	... nil.	£4,	£380...	£8 1 9	... £3	... £9 7 6

The capital of the Copiapo Company is really 169,485*l.*, but forfeited shares in the possession of the company amount to 7815*l.*, so that dividends are only paid on the amount above stated. The forfeited shares might at any time be distributed as a bonus to the shareholders. As the return to an investor in the Copiapo Company on the present market price is 9*l.* 7s. 6d., against 6*l.* 5s. in the Panulcillo Company, it follows that an exchange of shares in the two companies would produce 50 per cent. more dividend. The Copiapo shares are at a discount of 12 per cent., whereas the Panulcillo shares are at a premium of 50 per cent. A rise of 5s. in Copiapo is equal to a rise of 10s. in Panulcillo, the one costing only 3*l.* and the other 6*l.* per share. There is more probability of a rise in the market value of the low priced shares.

The directors of the Panulcillo Company do not condescend to give their shareholders any information as to the progress of the company between the intervals of the half-yearly meetings, whereas the Copiapo Company not only declare quarterly dividends but send a brief monthly statement to their shareholders, showing the estimated profits and the monthly remittance. These estimates are proved by the accounts to be well under the mark. The last monthly report issued yesterday gives the estimated profits for September, before the recent rise in the price of copper, as 1250*l.*, and the remittance for the same month as 2319*l.* The enhanced value of copper will largely increase the profits of the Copiapo Company, and I should not be surprised if the dividend for the current year were greatly to exceed the estimates of its most sanguine shareholders. Investors in this class of property will appreciate the facts which this letter lays before them.—*London, Oct.* 1. ——— ON THE WATCH.

MINING IN NEW SOUTH WALES.

SIR,—The recent revival in mining continues here, and for the first time Victoria even is sending both capital and experienced men to our colony, and this fact alone has done a great deal to make us realise that our own mines are really as valuable, whilst far more extensive and varied than those of our neighbours, and only want energy and experienced knowledge to yield like results; and it is not only New South Wales, but also Victoria and Queensland likewise, where new reefs and richer deposits are daily being opened up, and the best evidence is the few following extracts from this week's papers:—

COPELAND NORTH, WEDNESDAY.

Extra rich stone was struck in a fresh part of the Hidden Treasure Company's tunnel to-day. CARCOAR, WEDNESDAY.

Promising reports continue to be received from the newly discovered reefs at Mount Macdonald. Mr. Surain, of Sydney, has just brought in rich specimens from some claims which he has secured on behalf of a Sydney association. He reports that the stone now being got in the prospecting claims averages about 40 ozs. to the ton. The stone is showing gold freely. The Melbourne Mining Association have completed the purchase of Oliver's selection for some 13,000*l.* The new mining manager, Mr. Lawn, from Sandhurst, has arrived for the purpose of taking charge of the New Balmoral Company's Works A splendid sample of nuggetty gold, weighing 20 ozs., was brought to town yesterday from Jack's Creek. TEMORA, WEDNESDAY.

The escort left this morning with 4435 ozs. 0 dwt. 18 grs.—Bank of New South Wales, 2106 ozs. 13 dwts. 18 grs.; A. J. S. Bank, 2328 ozs. 7 dwts.: 1000 ozs. are still in hand, owing to parties not having finished washing. ADELONG, WEDNESDAY.

The gold escort to-day took for the Bank of New South Wales 767 ozs. 7 dwts. 8 grs.; for the Commercial Bank, 260 ozs. 12 grs.

Curtain and party, adjoining All Nations claim, washed about 300 loads, which averaged about 15 dwts.; 12 ozs. in nuggets were picked out. No. 2, south of Murray's, washed about 400 loads, which averaged about 15 dwts. The South Australian Company washed this week 1100 loads; Golden Bar washed 80 loads, which averaged 7 dwts.; Parker washed 100 loads, averaging 1 oz.; Block No. 1, off Deutscher's, washed 40 loads, which gave 14 dwts. load; Townsend and party, Great Western Lead, washed 180 loads, which averaged 7 dwts.; Maloney P. C. washed 800 loads for an average of 10 dwts.; 200 loads from Constantine's Block averaged 5 dwts.

ANTIMONY.—The antimony mines, 12 miles distant from Armidale, are yielding large returns. Wagon loads of ore daily pass through for Sydney. About 200 men are employed. Several of the mines are one mass of pure metal. One-ninth share in John Moore and Co.'s claim is reported as purchased from Richard Palmer by Peter Speare, of Sydney, for 1000*l.* cash. Much larger sums have been refused for other shares.

COPPER.—A recent report from the Cobar Company states that 2500 tons had been raised from the different stopes at the different levels, and things throughout are in fair working order. At the smelting-works 1720 tons of ore have been smelted, producing equal to 193 tons fine copper: 240 tons fine copper have been made, and 61½ tons dispatched. During the last week of the month work was interrupted through not getting in sufficient supply of firewood, owing to wet weather.

All these items refer to New South Wales mines only. Queensland, also, is no way behind hand, as these two or three paragraphs prove:—

CHARTERS TOWERS.—The warden reports that 3704 tons of stone have been crushed during the last month, which yielded 5288 ozs. of gold. The field was never more healthy and prosperous: 641 tons at Etheridge gave 1350 ozs. A discovery of bismuth ore in considerable quantities has been made in some worked-out alluvial ground at Percy River, 25 miles from Gilberton.

At Gympie a parcel of 100 ozs. was got to-day in the South New Zealand claim, which is looking well. A new reef has been met in the eastern cross-cut at 643 feet in No. 7 South Lady Mary; 86 tons from South New Zealand gave 488 ozs.

GYMPIE.—Telegrams announce that 228 tons from No. 1 North Phœnix, gave 1611 ozs. A dividend of 4s. per share has been declared. No. 1 North Glanmire declared 1s. dividend. The Miner of the 4th says that by far the most important discovery made in connection with our mines last week was the unexpected striking of an auriferous reef in the shaft of the Great Eastern, at a depth of 353 ft. from the surface. This, besides greatly increasing the immediate value of the property directly concerned, tends materially to confirm the favourable opinion of late held respecting the character of the eastern ground at the south extension of the gold field, and shows conclusively that there is yet a large area in that direction available for development. Where struck it appears to be made up chiefly of a mass of leaders, associated with the so-called chlorite. At first the manager was under the impression that the stone was not gold-bearing; but a shower of rain disclosed the precious metal, and induced him to alter his mind. The roof came in at the north end of the shaft, and, as far as can be judged, has a slight divergence easterly from the parallel of the old Glanmire Reef. It is thought to be a continuation of one of the middle veins of the North Glanmire claims, and that, consequently, what is now known as the Eastern Reef is still some distance east of the shaft. For the last 60 or 70 ft. of sinking the country operated on is of the description held in highest esteem in Gympie, and good slate continues in the bottom.

The paragraph about Gympie is more important than appears at first sight, as it goes to prove what has only recently been guessed at—that all the other old lines of reef which were abandoned as worked out at the shallow levels (when the "slate" came in again) only require to be really worked at a depth to again prove as rich or richer than ever, and rival the now famous Lady Mary, Phœnix, Smithfield, Glanmire, and other proved permanent lodes.

Our neighbouring (French) colony of New Caledonia, also, is proving itself very rich in minerals generally, and, above all, coal is just discovered there, the supposed area being over 1200 acres, and expected to extend over another 1000 or so. There is an excellent chance now for outside capitalists, as there are neither money, energy, nor experience in the island itself, and the various concessions are held by parties utterly unable to work them, although the Government terms are both liberal and easy. The following extract shows about all that is being really done at present:—

With respect to mining in New Caledonia there is now a *bona fide* movement in various quarters. For several months the nickel smelting furnaces, constructed about two miles from Noumea, have been in active operation day and night, producing about 15 tons per week of nickel metal, worth about 200*l.* per ton. As the mineral smelted gives about 10 per cent. of metal over 600 tons per month are smelted to produce this quantity. At last New Caledonia possesses a valuable export—one that is likely to be considerably augmented before long, for several other persons besides those in the one firm hitherto operating here in nickel are now turning their attention to this valuable mineral of which we possess such immense deposits. A representative of the wealthy house of Christofle of Paris is now here. Several gentlemen from Australia are away inspecting some mines of chrome and cobalt, the supplies of which are said to be positively inexhaustible. As the products of these minerals are largely employed in various arts and manufactures another valuable export may ere long be added to that of nickel. There is little doubt that in this comparatively unknown and (geologically speaking) singular country the advent of capital and a spirit of enterprise such as have developed the mining wealth of Australia, New Zealand, and Tasmania will bring to light the existence of invaluable and very varied mineral deposits.

The only firm in Sydney which is really practically working these is that of D. Storer and Sons, whose far-seeing partner here (Mr. Howard Walker) went down there, and not only secured valuable chrome and cobalt deposits, but also bought the s.s. India a bargain or rather a gift—and has now put her regularly in the trade between Sydney and Noumea, taking provisions and supplies generally down there, and loading back with full cargoes of copper ore to our smelting furnaces at Newcastle; and, as "nothing succeeds like success," his will very likely stimulate other firms here sooner or later to also try and help to develope the really great resources which New Caledonia undoubtedly possess.—*Sydney, Oct.* R. D. A.

RICH GOLDEN ORES—NEW SOUTH WALES.

SIR,—I notice the following paragraph in your issue of Aug. 6 last as to rich yields of golden ore from Brazil, but it is hardly to be compared with what New South Wales can show:—

THE RIO GRANDE DO SUL (BRAZIL) GOLD MINING COMPANY.—We are informed that the ten boxes of gold ore forwarded from these mines when Mr. Henry Clemes was recently in the Brazils have been sold by Messrs. H. Bath and Son, at Swansea, with the following result:—1. Assay per ton for gold, 63 ozs.—2. Assay per ton for silver, 22 ozs.—3. Weight, net, 18 cwts.—4. Price per ton, 245*l.* 14s.—5. Price per 18 cwts., net, 216*l.* 4s. 4d. The above result is extraordinary, and we believe almost unprecedented.

The Reform Gold Mining Company, holding a small lease of only 17 acres, in the celebrated Wentworth freehold estate near Orange, New South Wales, has just received from London the following account sales, as per published statement from the manager in the advertisement of New Reform Company in this day's Herald:—

1881, June 1—25 cwts. per ss. Potosi, net yield ...			£ 508	9 10
July 28—48½	„	Cuzco, ...	1846	15 0
Aug. 27—17	„	Lusitanian, ...	850	4 10

An assay (by J. Cosmo Newberry, F.G.S., Director of the Technological Museum, Melbourne, dated Sept. 26, 1881) of small samples gave 4414 ozs. per ton of pyrites, and from a block of serpentine sawn through the dust assayed 1257 ozs. per ton. The block from which (or about where) this was taken is now said to show from 4 to 5 ft. wide, by a length of 45 ft., and being at a depth of 390 ft. is likely to be more permanent than if nearer the surface. Besides this lode there are said to be other veins in the ground which gave very large yields before reaching the water level—6 tons, 800 ozs.; 10 tons, 1730 ozs.; 3 tons, 210 ozs.; 1½ ton, 960 ozs.; whilst of free gold about 6 tons were taken out of the Wentworth estate, generally from other shallow workings—so Brazil is hardly unprecedented.

Sydney, Oct. ——— R. D. ADAMS.

THE COMING GOLD FIELDS—GOLD COAST COLONY.

SIR,—A glance at the early history of the Gold Coast may not be uninteresting to the readers of the *Mining Journal*. It is a country with which the general public is unacquainted. In days gone by its commerce was kept in the hands of the few, and has continued so up to the present. It is now being opened up, and I have every reason to believe that during the next few years active steps will be taken to develope its wealth. In these days of railways new lands soon become familiar to us. Should the riches of the Gold Coast justify the adoption of such improvements, and there is very little doubt that they will, in a few years time they will necessarily have to be constructed. Prejudice there is against the Gold Coast, but that has always existed against new countries in one form or another, but even this gives way when commercial advantages positively and unmistakably reveal themselves, and large fortunes are made by the pioneer. The history of the discoveries in Africa is exceedingly interesting to the curious. Many years were spent in gaining anything like a knowledge of its coast-line, and although Don Henry of Portugal was the first to set on foot the navigation of seas at that time quite unknown, America was discovered by the Spaniards some years before the route to India was made known by the Portuguese. Columbus discovered America at the first attempt, while many voyages were made by the Portuguese on the coast of Africa before they got as far as the Gold Coast. When Don Henry, then Duke of Visco, was serving under his father at Ceuta, he acquired information from the Moors relative to Western Africa. The nomadic Moors had a thorough acquaintance with the tribes bordering on the great desert as far as South Guinea. Adam Smith thought that the idea of maritime discovery was kindled in the breast of the young Duke by the desire of finding a way by sea to those countries from which gold was brought by the Moors across the desert. No doubt the stories told to him by the Moors of West Africa fired his imagination and quickened his reason, so that he was led to conclude the attempt would succeed. It is not unreasonable to suppose that the Moors related to him that there was a sea beyond the most southerly part they had hitherto reached. The persistency of the Duke of Visco in his purpose being so great that in 1412 the Duke sent an expedition to explore the West Coast of Africa. This was the first voyage of discovery of the Portuguese, or indeed of any nation of recent times. How far this expedition succeeded there is no record to show, but it could not have been very successful, for although voyages were made every year the furthest point seems to have been C. Cantin; yet instructions were always given to go further south. Fear prevented them making great efforts; they dared not go out of sight of the coast, and thus timidly they continued their labours. Superstition also ran high in those days, and in the legends of the ancients the torrid zones had terrors of burning sands and scorching vapours. The shoals of Cape Bojador, extending some 60 leagues, were regarded as a providential bar to keep them from destruction. The reports made to Don Henry, favourable or not, never caused him to waver. He applied himself in his leisure in prosecuting scientific studies calculated to advance his object. Engaging men of science he encouraged the studies of astronomy and navigation, establishing what we should call a naval college. About this time (1418) the Maderia and Canary Islands were discovered. In all ages ignorance has clamoured against advance, and Don Henry experienced no small amount of opposition, envy of course joining in the cry. New enterprises have always their rash side to some one, and divergence from the trodden path evokes the opinion that experience and knowledge are against them. Don Henry heard, but little regarded, the advice offered. His studies and intercourse with learned men convinced him that his plans were correct, and he continued the course he had begun.

It was not until 1442 that Don Henry's voyagers first saw gold at the River Grande. The news caused considerable excitement in Portugal, and a trading company was formed a few years later. No great discovery had been made up to the close of Don Henry's life, which occurred in 1463. The furthest point reached up to this time seems to have been Sierra Leone, although by some his expeditions are held to have gone as far as Guinea. Cada Mosto, who served under Don Henry, states that considerable importations of gold were made from Guinea in 1453, but there is no authentic information of the discovery of the Gold Coast until 1471, and this was accomplished by Santaren and Escobar. Ten years later John II. of Portugal dispatched 500 soldiers and 200 mechanics of different sorts, and with them building materials for the erection of a fort. The landing was completed with great ceremonials, and Fort St. George at Mina was soon built. The fame of Guinea was spread throughout Europe, the King of Portugal taking to himself the title of "Lord of Guinea." Everything was done to keep it a royal monopoly, private adventurers being punished with death, and our own King Edward IV. was prevented from sending out an expedition on the King of Portugal showing that the Pope had granted him the title to Guinea. What the returns were at this time it is impossible to say; they must, however, have been very considerable to have caused the Portuguese to go to the expense of erecting a castle, and following this up with special precautions to preserve the advantages they held. The success achieved by the Portuguese was not destined to be held long without being assailed by England, and our forefathers evinced very sincere desires to participate in the profits which were being made. Accordingly, about ten years after the royal protests had been made by the "Lord of Guinea," an English expedition, under the command of Windham and Finteada, a Portuguese, was dispatched; but owing to the tyranny and foolishness of Windham the expedition suffered terribly. The gold brought home was 1800 ozs., equal to about 7000*l.* The year following, 1554, an expedition under Captain Lok brought back 4800 ozs. of gold, worth about 19,000*l.*, in those days equal to 90,000*l.* or 100,000*l.* William Towerson, a City merchant, made the voyage in 1555, returning with about 1000 ozs. of gold, or 4000*l.* In 1556 the same adventurer brought back nearly 900 ozs. of gold, value 3500*l.* In 1558 Towerson again went out, and by trading and plundering the French whom he found at the Gold Coast, collected 1250 ozs. of gold, value 5000*l.*; and had it not been for the French having been there the previous year and taken away 700 ozs. this voyage would have been even more profitable. In all these voyages large quantities of valuable commercial commodities were obtained in addition to the gold. Nearly every year the English sent ships out, but to about 1560 they were rendered unsuccessful through misadventure with the French, Portuguese, and also the natives. The Portuguese seem to have continued active trading operations, and for the most part now monopolised the traffic. Having established themselves at Mina, the natives were prevented as far as possible from bartering with strangers.

Gresham House, Dec. 1. ——— WILLIAM GABBOTT.

THE GOLD AND DIAMOND FIELDS OF SOUTH AFRICA.

SIR,—In my last I informed you of the great anxiety of many persons to get an interest in the Victoria Mine. Judging from the present anxiety of most persons who want to sell, I am afraid the new Eldorado is no better than many of the other worthless concerns. Last Monday's Advertiser contained a note from the husband of a painted Korrana squaw trying to get up a gold discovery at the Vaal river for the benefit of his shanty; but as a letter appeared in one of last week's papers from Mr. Kitto, the mining engineer, pointing out the impossibility of finding payable gold within 50 miles of Kimberley, his attempt at trying a bogus rush to the Vaal is sure to be a failure. Mr. Kitto states that he has "never seen a river in which he could not find a trace of gold, but the quantity of gold found in the Vaal is smaller than that of any river in Europe. There is at present a large quantity of gold being brought into this place from the Transvaal, so I shall expect shortly to hear of new discoveries here."

Mr. C. Stransky's account of the diamond mines is certainly favourable. To speak of the claims in the Kimberley Mine as being worth 25,000*l.* is absurd. Many of the claims in the Kimberley Mine are not worth a farthing; to hint that the diamond soil is all worth 3*l.* per load is also absurd; it used to be a very common thing to see the blue, as they call it, being sold on the edge of the mine, after it had been broken and hauled to surface, at 10s. per load.

I ask why is it that all connected with the Kimberley Mine, either in speaking or writing about the concern, studiously avoid any reference to the Reef liability? It is a fact that if the Kimberley Mine was quite free of reef, and some kind of guarantee could be given that the diamond formation will not soon cut out, its aggregate value would be about two and a-quarter millions sterling. But with a reef liability of over a million sterling, and no proof that the diamond formation will not soon cut out, the public can draw their own conclusions. I should be very sorry indeed to say anything to injure such an important industry, and my only object is to place matters before the mining public in their true light, and to warn them that if they invest in the diamond mines of this country they should secure to themselves the management, or they are not likely to see their money back. There is nothing to complain of in the quality or extent of the mines themselves; but with the present extravagant and reckless system of management it is impossible for the mines to pay much dividend.

I have just seen a gentleman who has been inspecting the Kamfers Dam Mine, and he informs me that they are opening that concern with economy, and performing all kinds of work at one-fifth of the ordinary Kimberley price. This is a new mine, about the same size as Kimberley. They have just struck the blue at a depth of 70 feet, which looks very much like the Kimberley blue. The success of this mine, like all the others, will depend on the mode of management. They have begun well, and it is to be hoped they will continue in well doing.

At Bultfontein the quality of the stuff does not change in depth, and as the blue is much harder than the top yellow stuff, there is less chance of profits. At De Beers Mine there are some very good claims, but most of the large companies work as if dividends were the last thing they thought of.

While I write the long-wished-for rain is coming down as if it intended to make up for lost time, and, as usual, no person is prepared for it. The unsightly and dangerous drains on each side of the streets will not carry off the water, and each street presents the appearance of a muddy river. Large millstreams of water rush in at people's front doors, and are only prevented from passing through by equally large streams rushing in at the back. Shoals of bottles eddy at every street corner. Old shoes and old hats sail by in hundreds, and filth that had been previously deposited in certain localities to the annoyance of a few, is scattered indiscriminately through the city for the benefit of the whole. All traffic is suspended, and bad as Kimberley is in the hot dusty weather a worse place during heavy rain it is impossible to conceive.

I commenced this letter last evening, and I have this morning been about the mine and town, and the wreck after the rain is dreadful. I first saw two dead Kafirs pulled up, and treated somewhat disgustingly. Nearly every claim in the mine is idle, either through an influx of water or fallen reef.

To give your readers an idea of the administrative abilities of the mining board, I may inform you that the late contractors removed a large quantity of loose debris from the edge of the Kimberley Mine, and yesterday's rain converted the whole space into a large lake. This morning I observe a lot of Kafirs cutting drains over the edge of the mine for the purpose of turning the water from the lake into the mine, to be pumped out again from a depth of 500 feet.

The stores at the West-end were all flooded, and ready-made clothes and bags of flour, boots, ironmongery, and sugar, starch, hats, and tins of butter, floated about indiscriminately, and this morning, the water having drained off, all have settled down into a thick layer of mud, and forms a peculiar kind of conglomerate. It is difficult to know who are responsible for this state of affairs, the town council or the mining board.

The rains are seasonable, not unusually heavy, and if ordinary precautions were taken, instead of being a curse they would be a blessing.—*Kimberley, Nov.* 3. ——— CORRESPONDENT.

RIO TINTO COMPANY.

SIR,—Much attention has lately been given to the operations of this company. At a recent meeting of the shareholders the Chairman stated that this company would this year be able to turn out a million tons of ore per annum. Most of this will have, of course, to be treated on the spot, otherwise the market here would be glutted. The total consumption in the United Kingdom of sulphur pyrites—the class of ore that the Rio Tinto Company's mine yields—does not exceed 600,000 tons per annum, and any one of these great companies—Tharsis, Mason and Barry, or Rio Tinto—could easily supply the whole quantity. Up to the present time these three companies have had practically the monopoly of the market, and by agreeing amongst themselves for each not to sell more than a fixed proportion of the consumption, they have so far been able to keep prices artificially high, and thus pay good dividends. On the other hand, the chemical trade is much depressed just now, so much so that manufacturers are endeavouring to come to an agreement to reduce

ROOT'S
PATENT TUBULOUS STEAM BOILER
SAFE, ECONOMICAL, EASY TRANSPORT IN MOUNTAINOUS COUNTRIES

KNAP'S PATENT MECHANICAL STOKERS,
APPLICABLE TO ALL KIND OF BOILERS & FURNACES,—ECONOMICAL AND SMOKE CONSUMING.

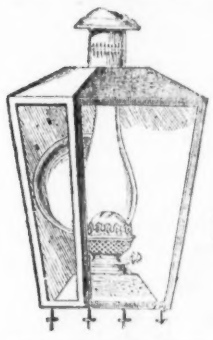
THE PATENT STEAM BOILER COMPANY.
HENEAGE STREET.
BIRMINGHAM.

JOSEPH FIRTH AND SONS'
New Patent Brick-making Machine,
Embraces the following advantages—viz.:
Implicity, strength, and durability. Compactness and excellence of mechanica arrangements, large producing capabilities, moderate cost.

It makes two bricks at once, and will make 2,000 to 14,000 plastic pressed bricks per day, hard enough to go direct to the kiln without drying; or it will make the bricks thoroughly plastic if required. For works requiring a machine at less cost the machine is made to turn out one brick at once, and is capable of producing 8600 bricks per day.

The Machine can be seen at work daily at the Brickworks of the Patentees, JOSEPH FIRTH AND SONS, WEBSTER HILL, DEWSBURY, and CROWBURY BRICK WORKS, SUSSEX; as also their Patent Gas Kiln for Burning Bricks, which possesses the following amongst other advantages, viz.:—Economy in Fuel, Rapidity and Quality of Work, even Distribution of Heat, and Total Consumption of Smoke.

PATENT DUPLEX LAMPS,
FOR COLLIERIES, IRONWORKS, &c.,
SUITABLE FOR
Pit Banks, Engine-Houses, &c., &c.



Each Lamp gives a light equal to 26 candles,
No breakage of Chimneys from Heat.

S. HOOPER,
CLOSE TO NEW STREET STATION,
Lower Temple Street,
BIRMINGHAM.

Illustrations on application.

INCREASED VALUE OF WATER-POWER.

MacADAM'S VARIABLE TURBINE.

This Wheel (which is now largely in use in England, Scotland, and Ireland) is the only one yet invented which gives proportionate power from both large and small quantities of water. It can be made for using a large winter supply, and yet work with equal efficiency through all variations of quantity down to a fifth, or even less if required. It is easily coupled to a steam-engine, and in this way always assists it by whatever amount of power the water is capable of giving, and therefore saves so much fuel.

This Turbine is applicable to all heights of fall. It works immersed in the tail-water, so that no part of the fall is lost, and the motion of the Wheel is no affected by floods or back-water.

References to places where it is at work will be given on application to—

MacADAM BROTHERS AND CO.,
BELFAST.

Just published.
COAL MINING PLANT.
By J. POVEY-HARPER, of Derby.
Comprising Working Drawings 2 ft. by 1 ft. 8 in., taken from actual practice, illustrative of Colliery Plant and the Working of Coal, &c.
Price bound, or loose sheets in portfolio, £2 5s.;
Or with the Designs for Workmen's Houses, £2 12s. 6d.

"A carefully and thoughtfully executed series of working drawings of coal mining plant. The work is of the utmost possible utility to students and mine managers, and for those undertaking to open out new collieries, whether in this country or abroad, no more complete guide could be desired."—*Mining Journal.*

"This is a very fine work, excellently got up, and well adapted for the purpose indicated. We strongly recommend the work on account of its extremely practical character to every colliery proprietor who may contemplate new erections or appliances in coal working, or who may be opening out new mineral property."—*Colliery Guardian.*

"We have no hesitation in saying that a more useful work of its kind has never come under our notice. Every detail and measurement are given, and we may fairly say that such an elaborate and useful work has not been issued in recent years, if at all."—*Coal and Iron Trades' Review.*

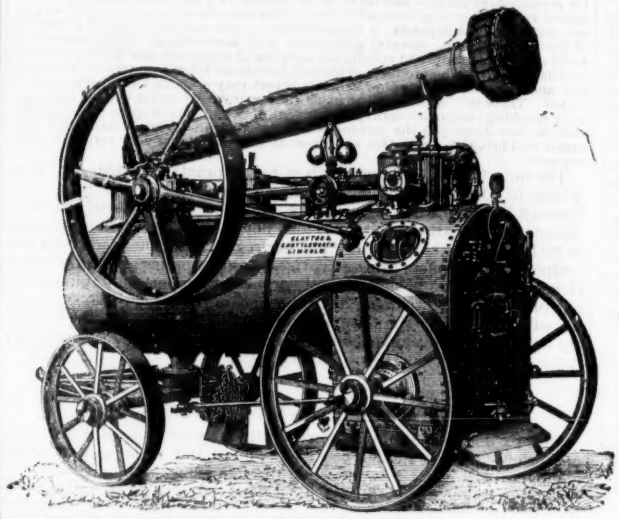
London: Published at the Mining Journal Office, No. 26, Fleet-street, E.C. Copies may be obtained by order of any bookseller, who can obtain them through their London agent.

TO PARENTS AND GUARDIANS.
AN ELIGIBLE OPPORTUNITY is now offered for the SETTLEMENT of an ACTIVE YOUNG GENTLEMAN IN CANADA. He will be enabled to obtain his profession as a Solicitor in five, or if he be a Graduate in three years. Cost of living about £150. In the meantime he will have active work, and obtain a knowledge of the Dominion, which is destined to become one of the most prosperous of the Colonies. Premium, £100 sterling.
HERBERT C. JONES,
32, Wellington-street, Toronto. Canada Land and Loan Agency.

CALIFORNIAN AND EUROPEAN AGENCY.
509, MONTGOMERY STREET, SAN FRANCISCO, CAL.
J. JACKSON, Manager

WHAT IS YOUR DISEASE—WHAT IS YOUR REMEDY?
GRATIS, free by post on receipt of Two Stamps to pay Postage.
THE BOOK OF POSITIVE REMEDIES.—It is the Book of Positive Medicine for the Cure of certain forms of Debility and Nervousness—viz: Mental and Physical Depression, Palpitation of the Heart, Noises in the Head and Ears, Impaired Sight and Memory, Indigestion, Pains in the Back, Headache, Piles, Constipation, Hysteria, Dizziness, Local Weakness, Muscular Relaxation, Nervous Irritability, Blushing, &c., resulting from Exhaustion of Nerve power, effect of Overwork, City Life, Worry, Brain Toil Intemperance, and other abuses of the system.
H. and H. Smith and Co., Positive Remedy Laboratory, 26, Southampton-row London, W.C.

1880-81.—MELBOURNE (AUSTRALIA) EXHIBITION.
Portable Engine—Gold Medal. Thrashing Machine—Gold Medal.



The Royal Agricultural Society of England have awarded Every First Prize to CLAYTON and SHUTTLEWORTH for Portable and other Steam Engines since 1863, and Prizes at every Meeting at which they have competed since 1849.

GOLD MEDALS, AND OTHER PRIZES,
Have been awarded to CLAYTON AND SHUTTLEWORTH at the various International Exhibitions of all Nations, including
LONDON, 1851, 1862; PARIS, 1855, 1867, 1878; VIENNA, 1857, 1866, 1873;
for their
STEAM ENGINES, Portable and Fixed
(For Coals, Wood, Straw, and every description of Fuel.)
THRASHING MACHINES.
GRINDING MILLS.
TRACTION ENGINES, &c.
Catalogues in English and in all Continental Languages free on application.

CLAYTON AND SHUTTLEWORTH,
STAMP END WORKS, LINCOLN, & 78, LOMBARD STREET, LONDON.

LONDON—1862. CHILI—1875.

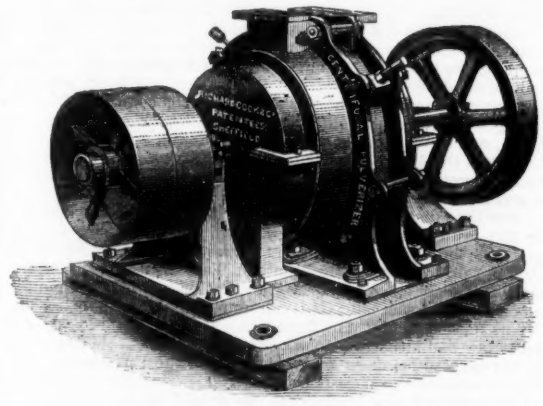


ESTABLISHED 1848.
W. BRUNTON AND CO.,
Penhellick Safety Fuse Works, Redruth,
AND
Cambrian Safety Fuse Works, Wrexham,
MANUFACTURERS OF
ALL KINDS OF SAFETY FUSE.
SILVER MEDAL (HIGHEST AWARD), MELBOURNE EXHIBITION, 1881, for
"EXCELLENCE OF MANUFACTURE."

PARIS—1878. MELBOURNE—1881.



LUCOPS'
Patent Centrifugal Pulveriser,



(Two tons per hour with 5 horse-power actual,)
For reducing to an impalpable powder, or to any requisite degree of fineness, all materials capable of being thus treated. CEMENT, CHEMICALS, GRAIN, COAL, COLOURS, PHOSPHATES, LIME, COPPER, TIN, ZINC, and other Ores with rapidity, completeness, and perfect uniformity.

THE ONLY GUARANTEED MACHINE FOR
GOLD QUARTZ.

This mill consists of a circular iron casing, the section being elliptical in form, and is fixed vertically on a firm bed or foundation plate, a shaft runs through the centre of the casing on which is keyed a series of arms, in the extremities of which revolve two or more slightly oblong iron rollers, which, when put in motion, fly off from the centre and run upon the interior periphery of the casing, and by centrifugal force crush and pulverise the article under treatment.

The effect produced by this system is most extraordinary in its practical results, the power required is small in consequence of the comparative absence of friction from the working parts of the mill, the combined results of the rolling action of the crushers and their impact by centrifugal force on the material, being the same in kind, but in degree far exceeding that of edge runners, the sides of the casing are formed as open wire sieves of the degree of fineness required, and a series of propelling blades attached to and revolving with the central shaft drive the material under treatment through the sieves as it is pulverised; by this arrangement the degree of fineness can with certainty be arrived at from coarse to extreme fine, and that with uniformity

Intending purchasers can at all times satisfy themselves by sending the material they wish to operate on, and seeing it pulverised. Over 300 in use. Prices and testimonials free on application.

RICHARD COOK & CO., ENGINEERS, SHEFFIELD.

MANCHESTER WIRE WORKS.



NEAR VICTORIA STATION, MANCHESTER.
(ESTABLISHED 1790).
JOHN STANIAR AND CO.,
Manufacturers by STEAM POWER of all kinds of Wire Web, EXTRA TREBLE STRONG for
LEAD AND COPPER MINES.
Jigger Bottoms and Cylinder Covers woven ANY WIDTH, in Iron, Steel, Brass, or Copper
EXTRA STRONG PERFORATED ZINC AND COPPER RIDDLES AND SIEVES



Shipping Orders Executed with the Greatest Dispatch.

Original Correspondence.

COPPER MINES OF CHILI.

SIR,—Some two months ago I acted on the suggestion contained in a letter which appeared in the Journal, and purchased 100 shares of the Panulcillo Copper Company at 5¼, cum dividend of 3s. 6d. The price of these shares is now 6 to 6¼. I have just realised my investment, and with the proceeds have bought 200 shares of 3*l.* in the Copiapo Mining Company. There are many points of resemblance between the two undertakings. For several years prior to 1880 neither company gave any return to its shareholders. Both companies after clearing off past deficits paid a small dividend for the financial year ending June, 1880. The Panulcillo Company for the year ending June, 1881, paid two half-yearly dividends of 4s. and 3s. 6d., together 7s. 6d., equal to 9*l.* 7s. 6d. per cent. on the capital of 20,000*l.*, carrying forward a small balance. The Copiapo Company for the same period has distributed four quarterly dividends of 1s. 6d., 1s., 1s., and 2s., together 5s. 6d., equal to 8*l.* 1s. 9d. on its capital of 161,700*l.*, carrying forward the large balance of 7712*l.*, equal to a further 4¾ per cent. The present price of the shares, 3*l.*, includes the last quarterly dividend of 2s. The position of the two companies is shown by the following table:—

Company.	Ordinary Capital.	Debentures.	Value of Shares. Par.	Called up.	Dividend.	Market price.	Yield on present value.
Panulcillo	200,000	... 35,000	£4,	£4	... £9 7 6	... £6	... £6 5 0
Copiapo...	161,670	... nil.	£4,	£380...	£8 1 9	... £3	... £9 7 6

The capital of the Copiapo Company is really 169,485*l.*, but forfeited shares in the possession of the company amount to 7815*l.*, so that dividends are only paid on the amount above stated. The forfeited shares might at any time be distributed as a bonus to the shareholders. As the return to an investor in the Copiapo Company on the present market price is 9*l.* 7s. 6d., against 6*l.* 5s. in the Panulcillo Company, it follows that an exchange of shares in the two companies would produce 50 per cent. more dividend. The Copiapo shares are at a discount of 12 per cent., whereas the Panulcillo shares are at a premium of 50 per cent. A rise of 5s. in Copiapo is equal to a rise of 10s. in Panulcillo, the one costing only 3*l.* and the other 6*l.* per share. There is more probability of a rise in the market value of the low priced shares.

The directors of the Panulcillo Company do not condescend to give their shareholders any information as to the progress of the company between the intervals of the half-yearly meetings, whereas the Copiapo Company not only declare quarterly dividends but send a brief monthly statement to their shareholders, showing the estimated profits and the monthly remittance. These estimates are proved by the accounts to be well under the mark. The last monthly report issued yesterday gives the estimated profits for September, before the recent rise in the price of copper, as 1250*l.*, and the remittance for the same month as 2319*l.* The enhanced value of copper will largely increase the profits of the Copiapo Company, and I should not be surprised if the dividend for the current year were greatly to exceed the estimates of its most sanguine shareholders. Investors in this class of property will appreciate the facts which this letter lays before them.—*London, Oct.* 1. ——— ON THE WATCH.

MINING IN NEW SOUTH WALES.

SIR,—The recent revival in mining continues here, and for the first time Victoria even is sending both capital and experienced men to our colony, and this fact alone has done a great deal to make us realise that our own mines are really as valuable, whilst far more extensive and varied than those of our neighbours, and only want energy and experienced knowledge to yield like results; and it is not only New South Wales, but also Victoria and Queensland likewise, where new reefs and richer deposits are daily being opened up, and the best evidence is the few following extracts from this week's papers:—

COPELAND NORTH, WEDNESDAY.

Extra rich stone was struck in a fresh part of the Hidden Treasure Company's tunnel to-day.

CARCOAR, WEDNESDAY.

Promising reports continue to be received from the newly discovered reefs at Mount Macdonald. Mr. Surain, of Sydney, has just brought in rich specimens from some claims which he has secured on behalf of a Sydney association. He reports that the stone now being got in the prospecting claims averages about 40 ozs. to the ton. The stone is showing gold freely. The Melbourne Mining Association have completed the purchase of Oliver's selection for some 13,000*l.* The new mining manager, Mr. Lawn, from Sandhurst, has arrived for the purpose of taking charge of the New Balmoral Company's Works A splendid sample of nuggetty gold, weighing 20 ozs., was brought to town yesterday from Jack's Creek.

TEMORA, WEDNESDAY.

The escort left this morning with 4435 ozs. 0 dwt. 18 grs.—Bank of New South Wales, 2106 ozs. 13 dwts. 18 grs.; A. J. S. Bank, 2328 ozs. 7 dwts.: 1000 ozs. are still in hand, owing to parties not having finished washing.

ADELONG, WEDNESDAY.

The gold escort to-day took for the Bank of New South Wales 767 ozs. 7 dwts. 8 grs.; for the Commercial Bank, 260 ozs. 12 grs.

Curtain and party, adjoining All Nations claim, washed about 300 loads, which averaged about 15 dwts.; 12 ozs. in nuggets were picked out. No. 2, south of Murray's, washed about 400 loads, which averaged about 15 dwts. The South Australian Company washed this week 1100 loads; Golden Bar washed 80 loads, which averaged 7 dwts.; Parker washed 100 loads, averaging 1 oz.; Block No. 1, off Deutscher's, washed 40 loads, which gave 14 dwts. load; Townsend and party, Great Western Lead, washed 180 loads, which averaged 7 dwts.; Maloney P. C. washed 800 loads for an average of 10 dwts.; 200 loads from Constantine's Block averaged 5 dwts.

ANTIMONY.—The antimony mines, 12 miles distant from Armidale, are yielding large returns. Wagon loads of ore daily pass through for Sydney. About 200 men are employed. Several of the mines are one mass of pure metal. One-ninth share in John Moore and Co.'s claim is reported as purchased from Richard Palmer by Peter Speare, of Sydney, for 1000*l.* cash. Much larger sums have been refused for other shares.

COPPER.—A recent report from the Cobar Company states that 2500 tons had been raised from the different stopes at the different levels, and things throughout are in fair working order. At the smelting-works 1720 tons of ore have been smelted, producing equal to 193 tons fine copper: 240 tons fine copper have been made, and 61½ tons dispatched. During the last week of the month work was interrupted through not getting in sufficient supply of firewood, owing to wet weather.

All these items refer to New South Wales mines only. Queensland, also, is no way behind hand, as these two or three paragraphs prove:—

CHARTERS TOWERS.—The warden reports that 3704 tons of stone have been crushed during the last month, which yielded 5288 ozs. of gold. The field was never more healthy and prosperous: 641 tons at Etheridge gave 1350 ozs. A discovery of bismuth ore in considerable quantities has been made in some worked-out alluvial ground at Percy River, 25 miles from Gilberton.

At Gympie a parcel of 100 ozs. was got to-day in the South New Zealand claim, which is looking well. A new reef has been met in the eastern cross-cut at 643 feet in No. 7 South Lady Mary; 86 tons from South New Zealand gave 488 ozs.

GYMPIE.—Telegrams announce that 228 tons from No. 1 North Phœnix, gave 1611 ozs. A dividend of 4s. per share has been declared. No. 1 North Glanmire declared 1s. dividend. The Miner of the 4th says that by far the most important discovery made in connection with our mines last week was the unexpected striking of an auriferous reef in the shaft of the Great Eastern, at a depth of 353 ft. from the surface. This, besides greatly increasing the immediate value of the property directly concerned, tends materially to confirm the favourable opinion of late held respecting the character of the eastern ground at the south extension of the gold field, and shows conclusively that there is yet a large area in that direction available for development. Where struck it appears to be made up chiefly of a mass of leaders, associated with the so-called chlorite. At first the manager was under the impression that the stone was not gold-bearing; but a shower of rain disclosed the precious metal, and induced him to alter his mind. The roof came in at the north end of the shaft, and, as far as can be judged, has a slight divergence easterly from the parallel of the old Glanmire Reef. It is thought to be a continuation of one of the middle veins of the North Glanmire claims, and that, consequently, what is now known as the Eastern Reef is still some distance east of the shaft. For the last 60 or 70 ft. of sinking the country operated on is of the description held in highest esteem in Gympie, and good slate continues in the bottom.

The paragraph about Gympie is more important than appears at first sight, as it goes to prove what has only recently been guessed at—that all the other old lines of reef which were abandoned as worked out at the shallow levels (when the "slate" came in again) only require to be really worked at a depth to again prove as rich or richer than ever, and rival the now famous Lady Mary, Phœnix, Smithfield, Glanmire, and other proved permanent lodes.

Our neighbouring (French) colony of New Caledonia, also, is proving itself very rich in minerals generally, and, above all, coal is just discovered there, the supposed area being over 1200 acres, and expected to extend over another 1000 or so. There is an excellent chance now for outside capitalists, as there are neither money, energy, nor experience in the island itself, and the various concessions are held by parties utterly unable to work them, although the Government terms are both liberal and easy. The following extract shows about all that is being really done at present:—

With respect to mining in New Caledonia there is now a *bona fide* movement in various quarters. For several months the nickel smelting furnaces, constructed about two miles from Noumea, have been in active operation day and night, producing about 15 tons per week of nickel metal, worth about 200*l.* per ton. As the mineral smelted gives about 10 per cent. of metal over 600 tons per month are smelted to produce this quantity. At last New Caledonia possesses a valuable export—one that is likely to be considerably augmented before long, for several other persons besides those in the one firm hitherto operating here in nickel are now turning their attention to this valuable mineral of which we possess such immense deposits. A representative of the wealthy house of Christofle of Paris is now here. Several gentlemen from Australia are away inspecting some mines of chrome and cobalt, the supplies of which are said to be positively inexhaustible. As the products of these minerals are largely employed in various arts and manufactures another valuable export may ere long be added to that of nickel. There is little doubt that in this comparatively unknown and (geologically speaking) singular country the advent of capital and a spirit of enterprise such as have developed the mining wealth of Australia, New Zealand, and Tasmania will bring to light the existence of invaluable and very varied mineral deposits.

The only firm in Sydney which is really practically working these is that of D. Storer and Sons, whose far-seeing partner here (Mr. Howard Walker) went down there, and not only secured valuable chrome and cobalt deposits, but also bought the s.s. India a bargain or rather a gift—and has now put her regularly in the trade between Sydney and Noumea, taking provisions and supplies generally down there, and loading back with full cargoes of copper ore to our smelting furnaces at Newcastle; and, as "nothing succeeds like success," his will very likely stimulate other firms here sooner or later to also try and help to develope the really great resources which New Caledonia undoubtedly possess.—*Sydney, Oct.* R. D. A.

RICH GOLDEN ORES—NEW SOUTH WALES.

SIR,—I notice the following paragraph in your issue of Aug. 6 last as to rich yields of golden ore from Brazil, but it is hardly to be compared with what New South Wales can show:—

THE RIO GRANDE DO SUL (BRAZIL) GOLD MINING COMPANY.—We are informed that the ten boxes of gold ore forwarded from these mines when Mr. Henry Clemes was recently in the Brazils have been sold by Messrs. H. Bath and Son, at Swansea, with the following result:—1. Assay per ton for gold, 63 ozs.—2. Assay per ton for silver, 22 ozs.—3. Weight, net, 18 cwts.—4. Price per ton, 245*l.* 14s.—5. Price per 18 cwts., net, 216*l.* 4s. 4d. The above result is extraordinary, and we believe almost unprecedented.

The Reform Gold Mining Company, holding a small lease of only 17 acres, in the celebrated Wentworth freehold estate near Orange, New South Wales, has just received from London the following account sales, as per published statement from the manager in the advertisement of New Reform Company in this day's Herald:—

1881, June 1—25 cwts. per ss. Potosi, net yield ...	£	508	9	10
July 28—48½ „ Cuzeo, ...		1846	15	0
Aug. 27—17 „ Lusitanian, ...		850	4	10

An assay (by J. Cosmo Newberry, F.G.S., Director of the Technological Museum, Melbourne, dated Sept. 26, 1881) of small samples gave 4414 ozs. per ton of pyrites, and from a block of serpentine sawn through the dust assayed 1257 ozs. per ton. The block from which (or about where) this was taken is now said to show from 4 to 5 ft. wide, by a length of 45 ft., and being at a depth of 390 ft. is likely to be more permanent than if nearer the surface. Besides this lode there are said to be other veins in the ground which gave very large yields before reaching the water level—6 tons, 800 ozs.; 10 tons, 1730 ozs.; 3 tons, 210 ozs.; 1½ ton, 960 ozs.; whilst of free gold about 6 tons were taken out of the Wentworth estate, generally from other shallow workings—so Brazil is hardly unprecedented.

Sydney, Oct. ——— R. D. ADAMS.

THE COMING GOLD FIELDS—GOLD COAST COLONY.

SIR,—A glance at the early history of the Gold Coast may not be uninteresting to the readers of the *Mining Journal*. It is a country with which the general public is unacquainted. In days gone by its commerce was kept in the hands of the few, and has continued so up to the present. It is now being opened up, and I have every reason to believe that during the next few years active steps will be taken to develope its wealth. In these days of railways new lands soon become familiar to us. Should the riches of the Gold Coast justify the adoption of such improvements, and there is very little doubt that they will, in a few years time they will necessarily have to be constructed. Prejudice there is against the Gold Coast, but that has always existed against new countries in one form or another, but even this gives way when commercial advantages positively and unmistakably reveal themselves, and large fortunes are made by the pioneer. The history of the discoveries in Africa is exceedingly interesting to the curious. Many years were spent in gaining anything like a knowledge of its coast-line, and although Don Henry of Portugal was the first to set on foot the navigation of seas at that time quite unknown, America was discovered by the Spaniards some years before the route to India was made known by the Portuguese. Columbus discovered America at the first attempt, while many voyages were made by the Portuguese on the coast of Africa before they got as far as the Gold Coast. When Don Henry, then Duke of Visco, was serving under his father at Ceuta, he acquired information from the Moors relative to Western Africa. The nomadic Moors had a thorough acquaintance with the tribes bordering on the great desert as far as South Guinea. Adam Smith thought that the idea of maritime discovery was kindled in the breast of the young Duke by the desire of finding a way by sea to those countries from which gold was brought by the Moors across the desert. No doubt the stories told to him by the Moors of West Africa fired his imagination and quickened his reason, so that he was led to conclude the attempt would succeed. It is not unreasonable to suppose that the Moors related to him that there was a sea beyond the most southerly part they had hitherto reached. The persistency of the Duke of Visco in his purpose being so great that in 1412 the Duke sent an expedition to explore the West Coast of Africa. This was the first voyage of discovery of the Portuguese, or indeed of any nation of recent times. How far this expedition succeeded there is no record to show, but it could not have been very successful, for although voyages were made every year the furthest point seems to have been C. Cantin; yet instructions were always given to go further south. Fear prevented them making great efforts; they dared not go out of sight of the coast, and thus timidly they continued their labours. Superstition also ran high in those days, and in the legends of the ancients the torrid zones had terrors of burning sands and scorching vapours. The shoals of Cape Bojador, extending some 60 leagues, were regarded as a providential bar to keep them from destruction. The reports made to Don Henry, favourable or not, never caused him to waver. He applied himself in his leisure in prosecuting scientific studies calculated to advance his object. Engaging men of science he encouraged the studies of astronomy and navigation, establishing what we should call a naval college. About this time (1418) the Maderia and Canary Islands were discovered. In all ages ignorance has clamoured against advance, and Don Henry experienced no small amount of opposition, envy of course joining in the cry. New enterprises have always their rash side to some one, and divergence from the trodden path evokes the opinion that experience and knowledge are against them. Don Henry heard, but little regarded, the advice offered. His studies and intercourse with learned men convinced him that his plans were correct, and he continued the course he had begun.

It was not until 1442 that Don Henry's voyagers first saw gold at the River Grande. The news caused considerable excitement in Portugal, and a trading company was formed a few years later. No great discovery had been made up to the close of Don Henry's life, which occurred in 1463. The furthest point reached up to this time seems to have been Sierra Leone, although by some his expeditions are held to have gone as far as Guinea. Cada Mosto, who served under Don Henry, states that considerable importations of gold were made from Guinea in 1453, but there is no authentic information of the discovery of the Gold Coast until 1471, and this was accomplished by Santaren and Escobar. Ten years later John II. of Portugal dispatched 500 soldiers and 200 mechanics of different sorts, and with them building materials for the erection of a fort. The landing was completed with great ceremonials, and Fort St. George at Mina was soon built. The fame of Guinea was spread throughout Europe, the King of Portugal taking to himself the title of "Lord of Guinea." Everything was done to keep it a royal monopoly, private adventurers being punished with death, and our own King Edward IV. was prevented from sending out an expedition on the King of Portugal showing that the Pope had granted him the title to Guinea. What the returns were at this time it is impossible to say; they must, however, have been very considerable to have caused the Portuguese to go to the expense of erecting a castle, and following this up with special precautions to preserve the advantages they held. The success achieved by the Portuguese was not destined to be held long without being assailed by England, and our forefathers evinced very sincere desires to participate in the profits which were being made. Accordingly, about ten years after the royal protests had been made by the "Lord of Guinea," an English expedition, under the command of Windham and Finteada, a Portuguese, was dispatched; but owing to the tyranny and foolishness of Windham the expedition suffered terribly. The gold brought home was 1800 ozs., equal to about 7000*l.* The year following, 1554, an expedition under Captain Lok brought back 4800 ozs. of gold, worth about 19,000*l.*, in those days equal to 90,000*l.* or 100,000*l.* William Towerson, a City merchant, made the voyage in 1555, returning with about 1000 ozs. of gold, or 4000*l.* In 1556 the same adventurer brought back nearly 900 ozs. of gold, value 3500*l.* In 1558 Towerson again went out, and by trading and plundering the French whom he found at the Gold Coast, collected 1250 ozs. of gold, value 5000*l.*; and had it not been for the French having been there the previous year and taken away 700 ozs. this voyage would have been even more profitable. In all these voyages large quantities of valuable commercial commodities were obtained in addition to the gold. Nearly every year the English sent ships out, but to about 1560 they were rendered unsuccessful through misadventure with the French, Portuguese, and also the natives. The Portuguese seem to have continued active trading operations, and for the most part now monopolised the traffic. Having established themselves at Mina, the natives were prevented as far as possible from bartering with strangers.

Gresham House, Dec. 1. ——— WILLIAM GABBOTT.

THE GOLD AND DIAMOND FIELDS OF SOUTH AFRICA.

SIR,—In my last I informed you of the great anxiety of many persons to get an interest in the Victoria Mine. Judging from the present anxiety of most persons who want to sell, I am afraid the new Eldorado is no better than many of the other worthless concerns. Last Monday's Advertiser contained a note from the husband of a painted Korrana squaw trying to get up a gold discovery at the Vaal river for the benefit of his shanty; but as a letter appeared in one of last week's papers from Mr. Kitto, the mining engineer, pointing out the impossibility of finding payable gold within 50 miles of Kimberley, his attempt at trying a bogus rush to the Vaal is sure to be a failure. Mr. Kitto states that he has "never seen a river in which he could not find a trace of gold, but the quantity of gold found in the Vaal is smaller than that of any river in Europe. There is at present a large quantity of gold being brought into this place from the Transvaal, so I shall expect shortly to hear of new discoveries here."

Mr. C. Stransky's account of the diamond mines is certainly favourable. To speak of the claims in the Kimberley Mine as being worth 25,000*l.* is absurd. Many of the claims in the Kimberley Mine are not worth a farthing; to hint that the diamond soil is all worth 3*l.* per load is also absurd; it used to be a very common thing to see the blue, as they call it, being sold on the edge of the mine, after it had been broken and hauled to surface, at 10s. per load.

I ask why is it that all connected with the Kimberley Mine, either in speaking or writing about the concern, studiously avoid any reference to the Reef liability? It is a fact that if the Kimberley Mine was quite free of reef, and some kind of guarantee could be given that the diamond formation will not soon cut out, its aggregate value would be about two and a-quarter millions sterling. But with a reef liability of over a million sterling, and no proof that the diamond formation will not soon cut out, the public can draw their own conclusions. I should be very sorry indeed to say anything to injure such an important industry, and my only object is to place matters before the mining public in their true light, and to warn them that if they invest in the diamond mines of this country they should secure to themselves the management, or they are not likely to see their money back. There is nothing to complain of in the quality or extent of the mines themselves; but with the present extravagant and reckless system of management it is impossible for the mines to pay much dividend.

I have just seen a gentleman who has been inspecting the Kamfers Dam Mine, and he informs me that they are opening that concern with economy, and performing all kinds of work at one-fifth of the ordinary Kimberley price. This is a new mine, about the same size as Kimberley. They have just struck the blue at a depth of 70 feet, which looks very much like the Kimberley blue. The success of this mine, like all the others, will depend on the mode of management. They have begun well, and it is to be hoped they will continue in well doing.

At Bultfontein the quality of the stuff does not change in depth, and as the blue is much harder than the top yellow stuff, there is less chance of profits. At De Beers Mine there are some very good claims, but most of the large companies work as if dividends were the last thing they thought of.

While I write the long-wished-for rain is coming down as if it intended to make up for lost time, and, as usual, no person is prepared for it. The unsightly and dangerous drains on each side of the streets will not carry off the water, and each street presents the appearance of a muddy river. Large millstreams of water rush in at people's front doors, and are only prevented from passing through by equally large streams rushing in at the back. Shoals of bottles eddy at every street corner. Old shoes and old hats sail by in hundreds, and filth that had been previously deposited in certain localities to the annoyance of a few, is scattered indiscriminately through the city for the benefit of the whole. All traffic is suspended, and bad as Kimberley is in the hot dusty weather a worse place during heavy rain it is impossible to conceive.

I commenced this letter last evening, and I have this morning been about the mine and town, and the wreck after the rain is dreadful. I first saw two dead Kafirs pulled up, and treated somewhat disgustingly. Nearly every claim in the mine is idle, either through an influx of water or fallen reef.

To give your readers an idea of the administrative abilities of the mining board, I may inform you that the late contractors removed a large quantity of loose debris from the edge of the Kimberley Mine, and yesterday's rain converted the whole space into a large lake. This morning I observe a lot of Kafirs cutting drains over the edge of the mine for the purpose of turning the water from the lake into the mine, to be pumped out again from a depth of 500 feet.

The stores at the West-end were all flooded, and ready-made clothes and bags of flour, boots, ironmongery, and sugar, starch, hats, and tins of butter, floated about indiscriminately, and this morning, the water having drained off, all have settled down into a thick layer of mud, and forms a peculiar kind of conglomerate. It is difficult to know who are responsible for this state of affairs, the town council or the mining board.

The rains are seasonable, not unusually heavy, and if ordinary precautions were taken, instead of being a curse they would be a blessing.—*Kimberley, Nov.* 3. ——— CORRESPONDENT.

RIO TINTO COMPANY.

SIR,—Much attention has lately been given to the operations of this company. At a recent meeting of the shareholders the Chairman stated that this company would this year be able to turn out a million tons of ore per annum. Most of this will have, of course, to be treated on the spot, otherwise the market here would be glutted. The total consumption in the United Kingdom of sulphur pyrites—the class of ore that the Rio Tinto Company's mine yields—does not exceed 600,000 tons per annum, and any one of these great companies—Tharsis, Mason and Barry, or Rio Tinto—could easily supply the whole quantity. Up to the present time these three companies have had practically the monopoly of the market, and by agreeing amongst themselves for each not to sell more than a fixed proportion of the consumption, they have so far been able to keep prices artificially high, and thus pay good dividends. On the other hand, the chemical trade is much depressed just now, so much so that manufacturers are endeavouring to come to an agreement to reduce

their make 25 per cent., but before long the market will be greatly relieved, as the mines of Carpio, Lagunazo, Alosno, und other deposits in the district of the Rio Tinto Mines, are being vigorously opened out, and a railway is being made, and when this is completed large supplies of new pyrites will come into the market.

SHAREHOLDER.

SANTA CRUZ SULPHUR AND COPPER MINE.

SIR,—I see since some remarks were made in the Journal there has been a considerable rise in these shares. The last cargo that arrived in England contained 2⅛ per cent. of copper, and I am assured by a gentleman who has lately returned from the mine, and no way connected with the company, that he has seen ore taken from the lode containing 8 per cent. of copper. Rio Tinto Company pay large dividends out of 2 per cent. of copper. SHAREHOLDER.

THE SANTA CRUZ SULPHUR AND COPPER COMPANY.

SIR,—I really cannot understand why our shares are at such a discount—50 per cent. The company seems to be progressing as favourably as is possible for a company to do. Within the last few weeks they have received two cargoes of ore from the mine which realised a good price, and I think the first cargo of ore was received in June last, which realised 2*l.* 2s. 6d. per ton. I really cannot think the public can be aware of the value of this company's property or they would not miss the opportunity to secure a good holding in the concern at present prices, which are ¼ to ⅜ for 1*l.* shares fully paid. If all shareholders were like myself they would not part with their holdings, as I am certain that giving the company ample time they will prove to be quite as successful as others of a similar class—Rio Tinto and Tharsis; and I should say, judging from the quantity and quality of the ore which has been already raised and disposed of in the English markets, we shall before long see the shares at a good premium. A FIRM HOLDER OF SHARES.

DON PEDRO MINE.

SIR,—I was very glad to see a letter on Don Pedro Mine in last week's Journal, as showing that there is a shareholder who takes an interest in the mine, and who is prepared to criticise its management, which, looking at its results, one cannot think altogether satisfactory. The great mistake seems to have been the not sending out sufficiently powerful machinery at once, instead of frittering away the money in tinkering up the old wheel, and then, when money was provided, sending out machinery which was not anything like powerful enough. If they had seized the bull by the horns, and spent two or three thousand instead of five hundred, the mine would have stood in a very different position to-day; and even now, if the directors would forsake their timid policy and ask the shareholders for an amount sufficient to buy first class powerful machinery, with an assurance that the money would be devoted solely to that purpose, I believe they would cheerfully respond, for they cannot be so daft as to drop a good thing when they have it, and Don Pedro is undoubtedly a good mine. There can be no doubt or uncertainty about this, for we know from past working and on the authority of the managing director, that there is good paying stuff at the bottom, only waiting the clearing away of the water to be got. There is no doubt or uncertainty as to where the gold is to be found, and no expensive shafts to be sunk—in fact, a thoroughly well tested and valuable mine is selling for about two or three thousand pounds (the amount required for good pumping machinery), while many recently floated mines, about which hardly anything is known, have been sold for fifty times as much. I cannot but think that the required sum might be raised by debentures, and the recent fortunate discovery would materially assist (we may hope) by paying current expenses during erection. But whatever is done let it be done thoroughly and well; no half measures this time. I think for the sum named machinery powerful enough might be erected, but if it is not sufficient make it 5000*l.*, or whatever amount is necessary. Let there be power not only to clear the mine but to deal with at least half as much again, and let it be done at once. If a committee of the shareholders were elected to work with the directors to see that this policy was carried out, it would greatly increase the confidence of the shareholders, and they would much more readily subscribe the money; and, lastly, if the present consulting engineer advised the erection of the late pump and the present machinery (both of which have so signally failed) the sooner he gives place to another the better. ANOTHER SHAREHOLDER.

DON PEDRO MINE.

SIR,—I quite echo the sentiments of your correspondent "A Shareholder," and I trust they denote the gathering of a storm about the ears of our inert or incapable directors that may have, perhaps, the effect of clearing the air, and bringing us better weather and brighter days. I have just received the circular of the managing director, Mr. J. L. Dawson, notifying a grand "discovery," and the obtaining large amounts of gold. But such announcements are now too common to receive much welcome, or to call for the exercise of much faith. Whether this is a forerunner of another call or to induce further subscriptions I do not know, but to me it looks like it. Will your correspondent name some address to which communications can be sent, for I for one should be glad to join with him in attempting to make a change. We need some man of energy to come to our rescue. AN ORIGINAL SHAREHOLDER.

Nov. 30.

THE NOUVEAU MONDE GOLD MINING MYSTERY.

SIR,—The question has recently suggested itself to me as to whether this company actually exists, or is a mere phantom of the imagination, and yet one is assured of its existence by the daily quotation of ½ to ¾, and the business in the Stock Exchange Official List. According to this list one, and only one, transaction takes place every day, and that at the stereotyped price of ⅝. I have been a holder for years, having purchased some of my shares at above 2*l.*, and latterly have been advised to average the price by buying more at a low figure. I did so; price, of course, ⅝, at which sum it appears possible to "bull" or "bear." The company was started in 1851, with a great flourish of trumpets, and after a while it was forgotten; 1*l.* shares could be had for 3d., until about two years since there was great activity, valuable property was stated to have been acquired, and that is all that the proprietors of the mine, commonly called bondholders, are made acquainted with. There exists, or rather we are told of the existence, of a body of directors who transact whatever business there may be to bring them together, at some expensive offices in George Yard, Lombard-street. It appeared in print that one of these directors (Mr. Lewis I believe) visited the mine at the commencement of this year, with what object the management alone know, but I presume with some other idea than that of contracting the attack of fever from which he suffered. He has returned for some months, and the mystery is preserved. Enquiries directed to the office or made through the medium of the Journal meet with the like response—"nothing." How are expenses met? Why pay the rent of the costly offices? Where did the money for Mr. Lewis's visit come from? or who defrays the cost of the elaborate pamphlets (descriptive of the immense wealth of the mine) issued from time to time? Now, the registered capital is 200,000*l.*, in 1*l.* shares, half of which we will assume are held in France. Where are the proprietors of the other 100,000 shares? If they are actually in the flesh would it be deemed rash if, after this lifetime of patience, they were to call all English shareholders, or their representatives, together and devise some scheme for resuscitating this property or proving its utter worthlessness? Are the present directors elected for the term of their natural life, are they self-elected, and who steps in when a vacancy occurs? I leave the more practical part of the plan which I have endeavoured faintly to suggest to some one more versed in the working of public companies than I am, but now that there is a celebrated mining engineer at the twin mine, the Potosi, would it be possible to obtain the sanction of the manager of that concern to relieve him for a few days from his duties there in order to give his unbiased opinion of the present condition and prospects of the Nouveau Monde Mine? A subscription of 1d. per share would more than meet the expenses incidental to such a visit. Trusting that this letter may be the means of bringing about united action, and that speedily.—*Chiswick, Nov.* 30. BONDHOLDER.

THE QUARTZ HILL CONSOLIDATED GOLD MINING COMPANY.

SIR,—The ways of the Stock Exchange are wonderful, and to ordinary mortals their rules appear inexplicable. In the name of common sense what power behind the throne prevents the granting of a settlement in Quartz Hill shares? Companies by the dozen established on an abundant faith in results hoped for in the course of years obtain settlements from the committee before even their machinery has reached the ground of operation, while this solid and going concern honestly publishing a regular weekly return of substantial results from its legitimate mining operations is left out in the cold. This company only entered on its property about May 1 last, and the yield of gold has produced an income since August 1 from the old workings of over $16,000. As amongst mining enterprises it is customary to have to wait it may be for years and it may be for ever ere such results are obtained, it may be that surprise has paralysed the powers of the committee. Nevertheless many shareholders would like to see a settlement, and in due time quotation granted.—*Nov.* 29. Q IN THE CORNER.

HOOVER HILL GOLD MINING COMPANY.

SIR,—This is one of the cheapest mines on the market. Look at the fabulous premiums Indian mines have been and are at without returning 1 oz. gold, barring assays. Hoover Hill has returned 140 ozs. gold, and going to remit another bar this day, Dec. 3; yet this mine, with all its wealth and good prospects, shares stand at a discount. Will some reader kindly explain? ARGUS.

COLORADO UNITED MINES.

SIR,—As the new hoisting machinery is now at work I trust we may at last expect the vastly increased output of ore promised by our manager in his report sent to shareholders in July, wherein he also says that he has driven the 11th level east from Silver ore shaft a further distance of 231 ft., and will continue to drive the level easterly so long as the vein keeps its promising appearance. From a point 30 feet east of Silver ore shaft this level has disclosed a continuous body of ore ranging from 4 to 12 in. wide. There is now over the back of this level 400 fms. of ground entirely in reserve; it is the finest piece of ground I have ever seen in the mine. The most encouraging feature of this development is the fact that the ore vein appears strong in the bottom or floor of the level almost the entire length, showing that when we drive out the 12th level we shall disclose the same Ore shute. In common with many, my patience has been sorely tried by our hon. manager's many promises, but my faith in shortly seeing the company re-enter the Dividend List is firm.

Dec. 1. STOCKHOLDER.

EUREKA (NEVADA) MINING DISTRICT.

SIR,—I have the pleasure to enclose you my usual budget of news received from this mining centre:—

At no time during the past five years has the mining outlook of Eureka district looked so prosperous.

The wood merchants are doing a thriving business, the pine having advanced 50 cents and $1 per cord.

The coal haulers are taking advantage of the fine weather, and are bringing in large quantities of coal.

The Eureka Tunnel Company have established an assay office at their works.

The finest lot of ore ever taken from our mines was delivered yesterday afternoon at the Eureka Consolidated Reduction Works. It was from the Eureka Tunnel Company's mine.

The last shipment from the Eureka Tunnel worked $160 per ton.

Stockholders in the Prospect Mountain Tunnel were highly delighted yesterday to learn that a cave had been struck in the face of the tunnel. Some of the ore taken from the cave is very rich, but it will require several days to learn the extent of the ore body. We have no doubt but that it will prove extensive.

Charley Broy's teams brought down from the Eureka tunnel on Sunday 12 tons of ore, estimated to work $250 to the ton; this is the highest grade ore yet shipped from the tunnel. A good deal of the same kind has been sent down, but it was mixed with a lower grade, making the whole run about $150 per ton.

The Prospect Mountain tunnel has now been run a distance of 1775 ft.; when completed it will be 3000 ft. long.

The first instalment for the purchase of the El Dorado No. 2 mine by the Eureka Tunnel Company was paid yesterday.

The people of this section are holding on pretty closely to their Eureka tunnel stock. They are right about it. If the new bonanza continues to improve a little longer the shares will sell as readily for $10 or $20 as they do now for $2·50.

On Thursday last in the Richmond Mine between the sixth and seventh levels an extensive cave was discovered, which contains a vast amount of the richest ore ever struck in the mine. The probabilities are that it will even exceed the celebrated Potts's chamber. The company are to be congratulated upon their recent finds.

Ruby and Dunderberg pay all bills at their office to-day.

Hoisting works have been erected on the Bald Eagle, and work is going on in developing that mine. It is a very good little property, and I hope shareholders will profit by their investment.

Machinery has been put upon the Bowman Mine. This mine has made a number of very neat shipments.

A new body of ore was discovered in the Bowman Mine on Sunday last. It is not keown how large the body is, but the ore coming out is very rich. We hope they have struck it big.

The Geddes and Bertrand's new works are progressing finely.

The mines continue to look well at Lewis, and considerable good ore is being extracted.

Mr. H. C. Kirkpatrick, lessee of the Mountain Boy Mine, has just had some ore worked from that mine at the Eureka Consolidated works, which yielded $286 per ton, with 38 per cent. lead.

London, Dec. 1. RUBY HILL

YORKE PENINSULA MINING COMPANY.

SIR,—It is agreeable to find that the working of the mine during the year ended last June has resulted in a profit capable of paying one year's dividend on the preference shares. There is every reason to believe that the present year's operations will result in paying two years' dividends on these shares, thus leaving only two years' arrears of dividend to be paid. Now, this scheme of the directors is open to very serious objection, as it is never desirable to borrow money (which, after paying off the 5000*l.*, would leave a burden of 1150*l.* per annum on the mine) to pay dividends. The time for working the Bon Accord Mine, after lying so many years dormant, would seem to have arrived, and if we are to borrow money it will be much preferable to do so to work that very valuable property, and give the profits of two very valuable mines to clear off all the liabilities of the Kurilla Mine. I regret that I am unable to attend the meeting next Thursday, but I hope some shareholder will propose that one year's dividend on the preference shares only be paid, and that instructions be sent out to Capt. Anthony to prepare a statement as to the amount of capital required to work the Bon Accord Mine. The shaft is already sunk, a powerful engine and workmen's cottages erected there; and after the water has been pumped out, unless the shaft requires to be sunk deeper, the levels to reach the lodes, long believed but now proved to pass from the Burra Burra into the Bon Accord, can be cheaply and expeditiously driven. The amount of capital required to work the Bon Accord Mine must be of very small amount where so little preparatory work is required previous to driving the levels to reach the rich lodes of copper well known to be deposited in the property.

Alnwick, Dec. 1. THOS. BRADLEY.

CORSICAN MINES.

SIR,—I observe in the Journal of Nov. 12 that a scheme is in contemplation with a view of re-working the Olmeta Mine once more. I am surprised that this mine has not been more vigorously developed long since. I have visited this most gigantic property many times, and have traversed the whole ground from east to west, and from north to south, and have discovered a great many lodes croping up to the surface—in fact, one of which I particularly noticed projecting many fathoms in some places above the surface. I was very much interested in this particular lode, inasmuch as I traced the same for more than five miles, and in many places the lode was fully 60 ft. wide, containing a large quantity of gossan, green carbonate, and yellow and grey copper ore I must confess that I am astonished that this magnificent lode has not been more actively and extensively developed long ago. I am very pleased to find that a start is about to be made once more, and I hope that the directors will direct the development of the mine in the right direction, and by the right manager of practical experience, when I have no doubt that this property will prove to be of immense value.

If Mr. Applegarth has visited this property thoroughly I have no doubt he will agree with me as to the richness of these lodes at a reasonable depth.—Lama Mine: I would advise the company not to lose sight of this valuable property, as there are rich lodes running through this concession which have never been operated upon; besides there is a course of lead known to exist in one of the lodes which has been opened only a few feet below the surface which would produce the last time I saw it fully 4 tons per fathom.

Caerwys, near Newtown, Dec. 1. JAMES RICHARDS.

RUBY AND DUNDERBERG MINING COMPANY.

SIR,—I thank your correspondent "Nevada" for his reply about the low price of these shares; but he omits to explain why no dividend is declared in the face of the highly satisfactory weekly reports received. For instance, on Nov. 29 we read "Week's run from the furnace $7000, from 186 tons of ore, producing 24 tons bullion." We shall probably soon find that the directors will surprise the shareholders with a large and unexpected dividend. OBSERVER.

Nov. 30.

PETROLEUM.

SIR,—Will you permit me to correct that which if allowed to pass unnoticed would doubtless cause much uneasiness in the minds of the public generally respecting the petroleum bore rights. You say that in the opinion of the best German legal authorities that petroleum comes under the mining law, and that, therefore, all anyone has to do is to apply for a "Schurfschein" (the Austrian term) or "Müthung" (the German term) which can be easily obtained. This is misleading. Petroleum does not come within the mining law in any way whatever as laid down, and to make it perfectly clear to your readers I give you a transcript of the German text of that portion treating of minerals, metals, and all things proscribed or coming under the proscription of the law extracted from the mining law itself as published in Berlin even late in this year, and a translation of the same:—

"Allgemeines Berggesetz für die Preussischen Staaten von 24 Juni, 1865, eingeführt in das Gebiet des vormaligen Königreichs Hannover durch Verordnung von 8 Mai, 1867.

ERSTER TITEL—ALLGEMEINE BESTIMMUNGEN.

§ 1. Die nachstehend bezeichneten mineralien sind von dem Verfügungsrecht des Grundeigenthümers ausgeschlossen. Die Aufsuchung und Gewinnung der selben unterliegt den Vorschriften des gegenwärtigen Gesetzes. Diese Mineralien sind:—Gold, silber, quicksilber, eisen mit ausnahme von raseneisenerze, blei, kupfer, zinn, zink, kobalt, nickel, arsenik, mangan, antimon, und schwefel, gediegen als erze, alaun, und vitriolerze, steinkohle, braunkohle, und graphit, steinsalz nebst den mit demselben auf der namlichen lagerstätte von kommenden salzen und die soulquellen.

§ 2. Der erwerb und betrieb von bergwerken für rechnung des Staates ist den bestimmungen des gegenwärtigen gesetzes ebenfalls unterworfen.

An den rechten des Staates bezüglich des salz handels wird durch dieses gesetz nichts geändert."

TRANSLATION.

"General Mining Law of the Prussian States of the 24th of June, 1865, introduced into the dominions of the late Kingdom of Hanover by a special decree of 8th May, 1867.

FIRST HEAD—GENERAL DIRECTIONS.

§ 1. The hereafter mentioned minerals are excluded from the disposition of the freeholder. The mining and winning of the same are liable to the proscription of the present law. These minerals are gold, silver, quicksilver, iron, with the exception of surface iron ore, lead, copper, tin, zinc, cobalt, nickel, arsenic, manganese, antimony, and sulphur, pure as well as raw, alum and sulphur pyrites, stone coal, brown coal, and graphite, rock salt, together with salt and mineral springs found in the same place.

§ 2. The taking up and carrying on of mines on account of the State is brought likewise under the proscriptions of this present law.

The rights of the State for the sale of salt are not altered by this law."

I have had this law book lent me by the best legal adviser in Hanover, who states that there cannot possibly be the smallest pretence that the Government have any jurisdiction whatever over the rights of petroleum, as it is not laid down in the mining law, which opinion was confirmed by the chief notary in this city, and is identical with that expressed by the highest legal authorities in Berlin, Brunswick, Bremen, and Hamburg, and two things alone go to show the soundness of the opinions laid down—firstly, that the Government in the face of the rapid development of the industry has not moved a finger to assert its rights under the mining law to grant concessions for boring. Secondly, it is not to be supposed that the 20 companies which have started with German capital, nor bankers and capitalists who have purchased (and paid for in cash) the boring rights over large areas would have done so with chance of the Government putting a stop to those rights thus purchased, or if they could have got them by applying for a "Müthung" for a few shillings, or running the risk that the Government had, could, or would grant over their heads a "Schurfschein" or "Müthung" to some one else. You will, I am sure, be the first to own the thing is ridiculous even to think of. This is only a bugbear, the very idea, because it appears on the face of it, and is too patent that it is put forward for the purpose of endeavouring to lower the price or value of bore rights, but in the eye of truth it cannot fail to defeat its own object by enhancing the value of such rights, it becoming known indisputably that they can only be obtained by purchase on the law of supply and demand and the latter ruling now and still likely to continue. One of these miserably conditioned peasants—I saw the man by the way, I did not see the above depicted in any way—was asked the week before last to sell the bore rights on his land. A very high price was offered him, but his reply was to this effect:—"I have plenty of money to live on, and therefore what good to me is so much money. If I sell I must seek some other place (because they wanted to rent his house as well) and I do not care to. The money does not tempt me. Another thing is that as the trade and industry in petroleum comes to increase it must come in the direction of my land, and of course in such case I shall get a great deal more for it then than you even offer me for it, so I shall wait. I am in no hurry to sell. It is daily increasing in value."

The peasants on the Lüneberge Heide, which is an extensive heath, are not in such a miserable condition as your remarks lead one to suppose, for they are in general very well to do. They make a great deal of money from their extensive bee keeping establishments, also from the cutting and drying of turf, &c., of which there are enormous quantities, and which they dispose of in the various towns and outlying villages. Their apiary arrangements are not like our pretty rural cottage garden, with perhaps half-a-dozen hives on stands placed in a row, but buildings large enough to stall a dozen horses, and roofed with tiles, and in these buildings are kept the multitude of hives of bees, from the harvest of which they make a great portion of their income. In the various villages and nooks that I have found for myself I have failed to find the wretchedness that would be expected to be found from reading your remarks of last Saturday, and therefore infering that the peasant ought to be content with whatever is chosen to be given him for any boring rights of which he may be possessed. This is all a mere illusion, and your readers and the public generally must no longer be labouring under any such false or erroneous impressions; besides the peasants are not the only land owners, there are many large landed proprietors possessed of boring rights who have by the way mostly sold their rights to capitalists, and one such capitalist I know of has secured more than one million and a half marks worth of boring rights, that is he has expended that three years ago when they could be obtained at their cheapest rate. He has not sold any, nor will he be induced to sell. He is awaiting and biding his time till they have further yet enhanced in value. I may mention the Peine Oil Boring Company have not only struck oil but are now beginning to pump for sale. There was a fire this week at the Bremen Company's petroleum refinery at Peine, but it was fortunately confined to one of the buildings, the wind being in the direction to carry the fire from them, in one of which was

stored 2000 barrels of oil. It was got under in some hours. What was damaged can be repaired in a fortnight. As I was passing it yesterday I could see very little damage. A LONDONER.
Hanover, Nov. 23.

COMPRESSED CARTRIDGES.

SIR,—For a considerable time an action at law has been going on between Messrs. John Hall and Son, who want to monopolise the manufacture of compressed cartridges, and the New Sedgwick Gunpowder Company, who have been making and delivering them for three years. This action was settled on Monday in the High Court of Chancery by Messrs. John Hall and Son withdrawing and paying all costs, and judgment given in favour of the New Sedgwick Gunpowder Company.—*Newcastle-on-Tyne, Dec.* 1. JOHN G. EAST.

GRAVITATION UNDULATING RAILWAY.

SIR,—The exhaustive and overpowering evidence I have been enabled through your indulgence in a lengthened series of letters in the Journal to adduce, from the earliest ages down to the present time in favour of the gravitation undulating system of railway transit, I have been advised by interested parties to appeal at this juncture for public material support towards steps to be taken in so gigantic and world important an undertaking, as developed in the sequel destined to revolutionise the entire railway transport in this kingdom to the immense advantage of the industry, commerce, and general public weal. Such a step requires more matured consideration than I have had the opportunity of devoting to the counsel given me: 800,000,000*l.* in railways in the United Kingdom will not arrest this movement of onward swelling undulating progress. Railways no more than gas companies are endowed with a permanent existence, which latter distributing more than double railway dividends, are being gradually displaced by the electric light companies. That far-seeing intelligent men may direct their attention to the distribution of heat in lieu of light is to be desired, as the practicability of carrying on the dual processes involves double mains being laid down on account of the great difference in the quality of gas to be diffused. There is no more astounding spectacle nor greater problem in the present time than the conduct of railway magnates in manipulating millions of treasure confided by the widow and orphans upwards to their conscientious administration. I have contributed so largely on this topic that it is prolix to enlarge thereon. The menu of the Great Northern for the impending Parliamentary repast (campaign) is so vast, that from Sutton Bridge Dock scheme to their King's Cross—Liverpool-street, *confrerie*, &c., a choice selection of "Mets" is presented for the swallowing and digestion of the shareholders. Descending to an implied Americanism it is to be hoped the precited dock will be made to contain permanently a sufficiency of liquid to invigorate the sanguine proprietors to drink to its success without an outlay, cutting down their already reduced dividends. I quote this example as the most extensive *pot-au-feu* to administer satiety to the most voracious shareholders' appetite. For details I refer to the statutory notices which are before the public.

Cheap and expeditious transport is the all engrossing topic and problem, combined with the earnest deep seated aspiration of the nineteenth century, so replete with the practical application of scientific discoveries. The evidence before the Parliamentary Select Committee on railway rates and fares prorogued to the impending Session shows the immense surcharge in cost of railway transport in this country, and the incontestable data set forth by me prove the impossibility of the existing surface system approaching the economy and dispatch of the gravitation transit. All eminent practical railway authorities, mathematicians, and physcists admit its insuperable advantages in speed, economy of construction, and working over locomotive lines. The construction of the locomotive as already shown renders it incapable of utilising the moving power of gravity so economical, that a leading railway pioneer, the late Nicholas Wood, in his invaluable "Practical Treatise on Railroads," states—"It is of the utmost importance that the aid of gravitation be extended to every situation and in every case where its application is available." The surface railway was not only ushered into existence based upon gravitation, but for years worked by such to the fullest extent admissible on surface railways until compelled through its great accelerative velocity to resort to self-acting planes by gravity. The same high authority states—"In order to restrain the velocity of the descending wagons, for which the brake was not sufficient, self-acting planes were adopted in which the surplus gravity of the descending loaded wagons was employed in dragging the empty ones up the plane, naturally at a slow pace." On the first passenger line, the Stockton and Darlington, the gravitation system prevailed before the locomotive made its appearance. On that as well as the Liverpool and Manchester line, on both of which I frequently travelled in their earliest period, the gravitation system had a fair trial, and was found impracticable on account of the locomotive leaving the rails through velocity proving too much for the brake. I have in my previous correspondence shown the disasters accruing through the application of gravitation on surface railways, that it is supererogatory to recapitulate the lengthened details. It is well known that the late George Stephenson, a self-made man, was a purely mechanical genius devoid of any scientific training, and as I am intimately acquainted with the locality of his birth, occupation, and operations, I am enabled to realise the scope or range of his eye and mind with greater precision than is compatible with want of knowledge of contour of the country, &c. Convinced of the impracticability of application of gravitation to surface railroads, the levelling and tunneling system was devised as a means of enabling the locomotives to be used, thereby contracting the very power, the want of the full and free use of which I have shown is retarding material progress. The highest railway authority in his era, the late Nicholas Wood, states—"Except leveling down abrupt undulations, little care was taken to make the road with a uniform descent, as to this day those which exist show them to undulate very considerably." It is proposed to inaugurate the gravitation undulating system in Lapland, where I have shown the richest magnetic iron ore is found on the immediate surface, proved by Swedish Government analysis to contain as high as 74 per cent. pure metal. Various Swedish and British surveys show many million tons are extant, sufficient to supply the entire world with iron and steel of a much superior quality and at a greatly reduced price for decades of years. With the exception of purely nominal infinitesimal quantities conveyed by the reindeer the immense scattered Lapland deposits remain inviolate since the commencement of time from sheer want of transport, a surface railway having been found impracticable in the land of snow.

As an additional powerful incentive to construct the first gravitation undulation railway in Lapland I have secured the offer of free land and timber for the construction and equipment of a considerable portion of the line, which no doubt on application will be extended for the entire distance. The Swedish Government accorded to the Gellivare a large subsidy for the construction of a canal, which was only partially carried out—the result of which naturally prejudices an application from that company. I am assured an application from an independent source will be met with the greatest avidity by the Government, not only by granting free land and timber, but a large subsidy and forests at a purely nominal cost for manufacture and export.

Gellivare iron mountain is equidistant from the Gulf of Bothnia and the Atlantic 150 English miles from each seaboard. Cheap labour to any extent, housing, fuel, and food render the construction extremely cheap, the nature of the system involving nominal working expenses only. As it can be shown that a very large return can be made on invested capital with a perfected sea transport from the Norwegian Atlantic sea-board, never closed by ice, there is no doubt of any amount of capital being found to constitute a powerful limited company. Charcoal to any extent can be procured at a nominal cost, and coal and coke can be delivered freight free as return ballast by the company's large steamers, there being depth of water for the largest afloat. The mixed cargoes of wood, iron, or steel enable the manufactured article to be laid down in England of a much superior quality to any British make—far surpassing the steely iron, yclept steel, made by the Bessemer or Siemens-Martin and Thomas-Gilchrist processes, and at a lower price, thus revolutionising the trade. Favoured with public confidence I do not entertain the least doubt of a monopoly of the world's consumption of richest pure steel and iron, based upon irrefragable practical data.
Little Tower-street, Nov. 30. W. J. THOMPSON.

MARBELLA IRON ORE COMPANY.

SIR,—As several letters have appeared in your valuable Journal lately, all of which have more or less taken an optimist view of the position and prospects of the above mine, I should like to place before investors a few facts which I have gleaned from the statement of the late Chairman of the company (Mr. Smith) at the last annual meeting, as also from a half-yearly report which was issued to the shareholders in August last. As forming part of the Chairman's speech to the shareholders of the company on March 1 of the present year, he intimates that the company's own mine could not be worked at a profit, which statement must mean one of two things—either it had become exhausted, or the ore was of so poor a quality that it would not pay the cost of raising it. Further he remarked, (quoting from the *Mining Journal* of March 5) "We were as nearly on the rocks as a company could be. We were near the end of our capital, and did not know where to get more."

Now turning to the half-yearly report before referred to I find that the net profit for the first six months of the present year is 5401*l.* 15s. 2d., all of which will I suppose have to be put aside for depreciation, as no sum has hitherto been so applied. The auditors have strongly insisted that a certain sum out of profits must be allocated to the aforesaid account. As the mine from which the ore is being profitably worked has little more than three years of the lease to run, supposing that the company should be able to declare a dividend of 5 per cent. per annum for this very limited period (which I doubt very much) I would ask are the shares at their present price not far above their value? as should the company fail to get a renewal of the lease they will thereby become absolutely worthless. I leave your readers to judge of this mine on its own merits, and I would advise *bona fide* investors to let the "bulls" have their swing, and by-and-bye we shall see the shares drop to their real value.
Glasgow, Nov. 27. TRUTH SEEKER.

LEAD REPORT.

Since our last the lead market has been in a very dull state owing to rather a heavy arrival of 2000 tons of Spanish silver-lead, and the sales reported are as follows:—

300 tons Spanish, at	£15	2	6
500 "	5	5	0
230 "	15	2	6
400 "	15	3	9
400 "	Private terms.		

There is no animation in the market, and but a poor demand, with a tendency to fall. STOCKS.

CALSTOCK.

SIR,—I am very glad to fin that this important district will ere long, in all human probability, be connected with the rest of the world by a railway or railways. Certainly within two or three years at most this should be an accomplished matter. I am very glad, too, that among the many industries for which this parish has nearly a world-wide fame mining is assuming a very prominent position. Lodes and cross-courses abound nearly everywhere. The two important geological features necessary to successful copper and tin mining—granite and killas in close conjunction—are everywhere manifest. Capital has been liberally subscribed in many tens of thousands of pounds lately for the various mines by which we are surrounded, and one might venture to predict that, if judiciously expended in systematic and miner-like development of the various undertakings for which it has been forthcoming, will with scarcely an exception amply repay those who come forward to assist in developing the absolutely inexhaustible mineral and other resources of the district.

These resources may be said as yet only just to have been tapped, and the mining of the future will be very different in its operations to that of the past. Just look at Drakewalls. I suppose this bal is at least a hundred years old, and about a hundred fathoms deep. But now with ample capital, a spirited practical directory, and energetic local management we are expecting soon to see some of the immense reserves of mineral wealth doubtless contained in the sett, brought to the surface, stamped, dressed, and sent regularly to market, and the shareholders gratified with what they certainly deserve—regular substantial dividends. J. MILTON.
Nov. 26.

LADY ANN SILVER-LEAD MINING COMPANY.

SIR,—Permit me to supplement my remarks on the Lady Ann sett last week with a glance at what has been done in some of the neighbouring properties, many of whose lodes run through Mary Ann. Minera, with a capital of 45,000*l.*, produced net profits of over 620,000*l.* Westminster Mines produced from one portion over 1,000,000*l.*, and from one lode alone in eight years 55,000*l.* At Pant-ddu one portion, about 100 yards in length at surface, paid in royalty alone 90,000*l.* Jamaica Mines paid a dividend of 700*l.* on each 7*l.* share. Maes-y-Safn Mines returned over 400,000*l.* Denbighshire Consols formerly produced 10,000*l.* profits in a short time. Pwll Wheal and Flintshire yielded from 80 to 100 tons of lead ore per month for many years. Mould Mines produced 500,000*l.* worth of ores, giving 300,000*l.* net profits. At Pant-y-Mwyn a course of ore proved 150 yards long. All these rich properties either adjoin or are in the immediate neighbourhood of Lady Ann, and the mine may be said, as stated in the report from one of the mining engineers who inspected the property, "to be in the heart of the lead-producing channels, and contains over 400 yards of the Westminster main lodes, whole and undeveloped," and the directors are sanguine, and no doubt they are perfectly correct, of being able in a short time, and with little outlay, to show results that will prove Lady Ann to be worthy of being placed in the list with her wealthy sister mines.
Dec. 1. H. W.

MOUNT'S BAY CONSOLS.

SIR,—Seeing that the capital of this company is being called up so rapidly, in the face of the Chairman's statement at the Cannon-street Hotel meeting that not more than 10s. would be called up prior to the payment of a dividend, I hope my fellow-shareholders will convene a special meeting to appoint a committee to fully investigate the company's affairs without further delay. A SHAREHOLDER.
Nov. 29.

EAST WHEAL ROSE.

SIR,—It is surprising that great sums should be subscribed to gold mining in India when such a mine as East Wheal Rose is in our own country, and within a day's journey of any part of it. Any one who will read up the history of this mine must see that only money is required to open up one of the grandest properties in the United Kingdom. All the money necessary, and much more, is virtually in the hands of the directors at this moment. In 1845 eighteen lead mines paid dividends amounting to 215,450*l.*, of which sum East Wheal Rose paid 52,864*l.*, or one fourth of the entire amount. In 1852 East Wheal Rose yielded more lead than the whole produce of Cornwall had been a short time previously. The question then is, is the lead worked out? I invite discussion on this matter. Let any man living venture to assert that East Wheal Rose stopped because of any declension in the inherent value of the property. East Wheal Rose is evidently a question of capital, machinery, management; and of these only. There is the capital—much more than than enough—machinery of the most improved kind is in course of erection, and the capacity of the management, I presume, will not be disputed. With Middleton's lode, cut already, and stope commenced in Innes's lode, what will not take place here when the machinery is complete and everything at work, which may be expected very shortly. I have just returned from Cornwall and found the most reliable men ready to acknowledge the immense worth of the sett known as East Wheal Rose. One said, referring to the cutting of Middleton's lode, "From such ground as that, if properly worked, you may be prepared for the most startling intelligence." The ambition of the directors and managers of this mine is to make it again what it has been; and those who live six months will see whether, with present appliances, they are not able to extract from that magnificent piece of ground the unequalled wealth which it contains. Of course when shares get to 4 and 5 the whole world will want to buy. A LARGE SHAREHOLDER.
Leeds, Dec. 1.

EAST LONG RAKE MINE.

SIR,—In passing recently over the Halkyn Mountain I was attracted to this property on observing very spirited operations being vigorously carried on at surface; and on enquiry and observation I find it is likely a brisk epoch is dawning upon this undertaking. I saw several tons of lead ore of fine quality already dressed, and a large quantity of rich boose at surface under process of dressing. This mine is situated in a direct line north and south between the present rich North Hendre, and the old Brynwiog to the north, and the recently productive Prince Patrick, old Parys and Penyrhenblas to the south, on the same strata of carboniferous limestone; and the present manager (Capt. Vercoe) informs me that good courses of ore are now being laid open on the course of the main east and west lodes. I need not say, having reported favourably of this property for the present company some little time ago, I was much gratified to hear of such an early success, and trust it will long continue to aid in holding forth the richness and lead producing capabilities of this once famous mining district. WILLIAM FRANCIS.
Northop, Flintshire, Nov. 29.

MOELFRE MINE.

SIR,—I have great pleasure in informing you that our directors' meeting was held upon the mine a few days ago, and that they expressed themselves highly pleased both with the favourable nature of the lodes as well as the progress made in such a short time. For the future development of the mine I strongly recommended the driving of a deep adit level cross-cut to intersect the two large and well defined lodes known to exist, and by driving the said adit 21 fms. a cross-course or copper lode was intersected, containing very congenial spar and copper ore of high percentage, producing, in my opinion, full 20 per cent.; this lode is full 4 ft. wide. Continuing our cross-cut another 11 fms. beyond this point, No. 1 lead lode was cut into, which is full 40 ft. wide, composed of congenial spar, with a quantity of flookan and brilliant spots of lead ore; in fact, it bespeaks volumes for producing large quantities of lead ore at a little deeper point. In driving on from this lode about 13 fms. further south a new and unexpected lode was intersected, which increased our prospects very much, inasmuch as it contained a considerable quantity of flookan, quartz, carbonate of lime, and increasing quantities of lead ore to the first named lead lode, evidently proving that depth is the only means by which to obtain rich and permanent courses of lead ore. This last named lode has been cut into about 8 fms., and in my opinion the best part is ahead of us, from the very fact of the water issuing so very strong from the fore-breast. From this point I calculate we shall have about 15 fms. to drive to intersect No. 3 lode. One and all have great faith in meeting with a productive lode when intersected. Judging from the favourable character of the same at surface, where it was full 24 ft. wide, producing spots of lead throughout. All the scientific opinions expressed upon this lode are to the effect that a very productive lode will be met with when intersected. For the future guidance of the company, and in justice to the mine, I would strongly recommend the continuing of the driving of the deep adit level until the No. 3 lead lode is intersected, in order to ascertain the true bearing of the three lodes above named, so as to put us in a position to fix a correct spot for sinking a permanent engine-shaft to command all the lodes at a convenient distance from the junction of the same. I omitted to mention above that these three lodes form a junction about the middle or centre of our property, which is of great importance for our future. JAMES RICHARDS.

THE GRIFFIN SILVER-LEAD MINING COMPANY.

SIR,—Referring to the two letters bearing the signature "A. J. Gate," in last week's Journal, in which my name is mentioned, I beg you will permit me to repeat that what was stated in the report issued by the directors, dated Nov. 2, as also what I said at the shareholders' meeting on Nov. 16, is true—That during the past few months I have made three visits to this property, that I carefully examined all that was to be seen, that I traced the boundaries, and made myself thoroughly acquainted with its position, the area and the contour of the surface, that I walked to the end of the deep adit level, 85 fathoms long, and saw the several lodes and the caunter lode that have been intersected. I was peculiarly impressed with the peculiarly advantageous position of the two setts (Griffin and Cyran) possessed by this company, which is all that can be desired, abutting, as they do, on a good turnpike road, and also close to the Bettws-y-Coed Station of the London and North-Western Railway.

I wish to add that I was also impressed with its important position relatively to the 10 or 12 mining setts in the rear and higher up the mountain. To drain any of these other mines independently recourse must be had to the old expensive method of erecting powerful steam pumping and drawing engines, &c., whereas by co-operating on fair and equitable terms with the Griffin Company the whole of these other mines may be drained by the new, simple, and natural principle of deep adit level drainage by gravitation, and the ores threfrom withdrawn to dressing-floors conveniently placed in proximity to water power and the railway station.

I have already qualified myself by the purchase of shares, and have been elected a director of the company, and I also intend to subscribe a further amount of the capital necessary for the purpose of developing these mines, in which I hope to have the co-operation of shareholders and others in order to make this enterprise one of the most successful in the Principality. HENRY MAUDSLAY,
Member Insts. Civil and Mechanical Engineers of England.
Westminster Palace Hotel, Victoria-street, Dec. 1.

WEST LISBURNE MINING COMPANY.

SIR,—It is high time that shareholders should look after their own interests in the West Lisburne Mine. At the present rate of proceedings I think they will come to the conclusion that the sooner they go into liquidation the better, as all instructions regarding the working of the mine has been received from the directors, who, I believe, know little or nothing whatever about mining. In vindication of my own character, and in justice to the shareholders, I will not fail to express my views respecting the conduct of the Chairman and directors in next week's Journal. Shareholders' eyes have been so much opened of late that I think it is high time they should look after their own interests. LYLE GLANVILLE.
Ponterwyd, Aberystwith, Nov. 29.

MINING IN SHROPSHIRE—THE WOTHERTON MINE.

SIR,—Some weeks ago I wrote you saying that the Wotherton Mine Company were erecting mills to grind the barytes raised from their mine, and now they are finished a short account of them may not be amiss. In the first place, they have erected a pair of 14-in. engines supplied by the Sandycroft Foundry Company, a 40-horse boiler made by Galloway and Sons, Manchester, on their most improved principle, a mill-room, containing four pairs of stones, made by Davies and Sneade, Liverpool, and a kiln for drying the barytes before putting it through the mill. The whole of this work was completed within the short space of five months, which speaks well for the energy of the engineer (Mr. Lime), the agent, and the men at the mine: as, the mine being a long way from the railway station, it is very difficult to get materials to it quickly. The power from the engine is communicated to the mill by means of a large strap and pulleys, which will prevent the driving gear from being stripped should any undue strain be put upon it. The mill gearing is on the latest principle, and driven from beneath. Taking a general view of the whole concern, I must say that it works capitally. The quality of the barytes they are turning out is excellent, both as regards colour and firmness, and they hope by careful and judicious management to merit a good share of trade, for it is well known that the Wotherton barytes vein is unique for colour and quality. Provisions have been made in the mill-room for a fifth pair of stones,

which, I believe, are to be put up before Christmas. They will then be able to have four pairs always in work, and to grind a good quantity of barytes. I believe that they have just passed through a twitch in the vein underground in going westward, but that the lode is opening out again, and there is every sign of its improving, so that they will open a good length of stoping ground west of the narrow part. I am sure that I wish the new mills every success, and that they will be a boon to the directors, the shareholders, and everyone concerned.—*Wotherton Mine, Chirbury, Salop, Nov.* 30. BARYTES.

GUNNISLAKE (CLITTERS) MINE.

SIR,—But very recently this mine and its management were, in letters, assailed by statements, which at the meeting held on the 31st ult. were shown to have no foundation. In fact, it is pretty well known that one of the objects aimed at was, if possible, to bring down the shares to an unduly low value. The sale on the 17th inst. of two months' copper ores (457 tons) realised the splendid average price of 7*l.* 5s. 5d.; and, taken on its own merits, represented a profit of about 1300*l.*, equal to a dividend of 2s. 6d. per share. It is expected that the succeeding two months will prove quite as satisfactory (if not more so) both as to quantity and price. Bearing that in mind, and taking into account that, after providing for the dividend of 2s. per share declared at the last meeting, there would remain 880*l.* at the credit, there can be no doubt that the next four-monthly meeting will be the most satisfactory that has been held for years.

It can be said, without fear of contradiction, that the committee are doing their very best in the interests of the mine; and the extra expenses of boring machines, new plant, and other extra work which they are going to, are for the permanent benefit of the mine, and when once completed will put the mine in a splendid position, and enable the output to be largely increased. A letter in a local paper of last week showed how the mine in its output was progressing in quantity and value, the latter being more especially marked, and evidently proving that the deeper they go the richer is the ore. Taking the sales of November, 1879, November, 1880, and November, 1881, it figured out that November, 1880, as compared with 1879, showed increases of 20 per cent. in quantity and 72 per cent. in value, whilst November, 1881, showed in same manner as compared with November, 1879, increases of 43 per cent. and 167 per cent. Unless under circumstances that would render mining altogether unprofitable, there can be no question as to the continuing to pay dividends, and at the same time meet the extra heavy expenses that are being incurred; and when such extra charges have ceased the mine will then, indeed, be in a splendid position. It is already steadily working into a position of great importance, and later on will rank very high.—*Nov.* 30. COPPER.

FOREIGN MINING AND METALLURGY.

In the St. Dizier (France) group the iron trade has continued to present a firm tone; this is attributable to the fact that a fresh current of orders has set in. Prices have not changed; rolled coke-made iron has brought 8*l.* per ton; and coke-made ditto, 8*l.* 16s. per ton. The foundries in the St. Dizier group appear to be as well off as the forges; they are all overdone with work, and production is being carried to its utmost limits. Several foundries in the St. Dizier group, as well as in the centre of France, have announced an advance of 8*s.* per ton. The iron trade has continued to present a firm tone at Paris; merchants' iron has made 8*l.* per ton. The French forges are generally so full of orders that they are assured employment until the close of July, 1882; under these circumstances their managers show little disposition to accept fresh business. Prices have maintained their highest level upon the German iron markets; a further rise is not anticipated, but there has certainly been some advance during the past month. All descriptions of iron are in good demand in Germany, and a satisfactory winter season is anticipated. The order-books of the various German works are generally so well filled that they are assured employment for at least three months. Fresh contracts are being continually announced in Germany, and large orders for coal trucks are about, it is said, to be given out.

The general aspect of the Belgian iron trade has continued favourable. There has been no fresh general rise to record; and it is, perhaps, satisfactory that this should be the case, since it is always well to be prudent. It is noticed that numerous and well sustained orders for merchants' iron have come to hand, while a short time since the demand for this description was comparatively sluggish. Orders appear to be anticipated in Belgium on Chinese account. A rise in pig is talked of in Belgium; should such rise be witnessed Belgian forge-masters would be compelled to make a fresh step in advance. The latest current quotation for Luxembourg pig is 2*l.* 4s. per ton. The Belgian construction workshops are overdone with orders. The Orleans Railway Company has just let a contract for 15 large locomotives and tenders to the John Cockerill Company; these engines are not to be delivered until 1883, the John Cockerill Company being unable to complete them sooner. This is the second order of the kind which has been given out by the Orleans Railway Company. M. Rolin, of Braine-le-Comte, has obtained a contract for ironwork in connection with the Madrid Exhibition building, which will involve an outlay of 160,000*l.* or 200,000*l.* The production of steel ingots effected last year by the Angleur Steelworks Company was 47,439 tons, as compared with 35,610 tons in 1879-80. The aggregate amount of the sales effected by the works last year was 280,720*l.*; the amount paid in wages was 36,600*l.* The profits of last year admit of a dividend at the rate of 9 per cent. per annum.

Coal has remained very firm upon the Belgian markets. In consequence of the prevalence of milder weather there has at the same time been a certain check in the demand for domestic qualities of coal upon the Belgian markets, although, upon the whole, considerable deliveries have been made. Coke is scarce in Belgium, and very high prices have been paid for it. The German coal trade has exhibited considerable animation, an upward tendency being observed on all sides. This state of things is, however, due to some extent to transport difficulties occasioned by a scarcity of rolling stock upon the German railways. Industrial coal has been in extremely active demand in Germany; but, as in Belgium, there has been some slackening in the demand for domestic qualities in consequence of the milder weather which has prevailed. There is scarcely any stock of coal in the ports of the Rhine; a similar state of things has not been noticed since 1873. As regards the German State railways, it is affirmed that in obedience to the pressure of energetic public opinion the German Government will be shortly obliged to procure 200 additional locomotives and 7000 additional trucks. It will also be necessary to carry out more or less important improvements upon some of the lines recently taken over by the State. Under all the circumstances German coal owners are looking hopefully forward to 1882.

SOLID PETROLEUM AND PAPER BARRELS FOR PETROLEUM.—According to a St. Petersburgh paper, a German, Herr P. N. Dittmar, has practically solved the problem of rendering petroleum solid—a problem considerably studied by chemists of late in view of the large question of transport. A company has been formed in Russia to work the patent when completed. The transformation of the substance will not cost more than about 3d. per 36 lbs. (six copecks per pood), whereas the casks now used increase the cost of petroleum about 2s. 4d. for the same quantity (55 copecks per pood), leakage not considered. The mode of treatment is not yet disclosed, and chemists to whom small samples of the solid petroleum have been sent have not been able to make out the nature of the foreign substances that are added in a proportion of 2, or at most 3 per cent., to solidify the petroleum. The reporter of the St. Petersburgh paper saw the product; he says it is of a wine-yellow colour, and has the consistency of very stiff gelatine; it can be kneaded with the fingers like wax, and is yet somewhat breakable. A small piece of the thickness of a lead pencil and about an inch long could be lit at one end and held with the fingers. It melted like wax, and it was only after a little, when hot drops ran down, that the flame had to be blown out. The danger of fire is considerably less than with liquid petroleum. The product can be easily liquefied when required by the addition of vinegar, and the process is rapid. The vinegar in time separates out below and the petroleum above. It is not stated whether the same vinegar can be used repeatedly. It appears that the higher and low boiling hydro-carbons in crude naphtha are not affected by the solidifying agent; in which case the costly apparatus for fractional distillation might be dispensed with. The advantages of solid petroleum would be peculiarly felt in regions like the Caucasus, where the naphtha industry suffers through the dearth of suitable wood for barrels. In this connexion we may note the fact that a whole cargo of petroleum was lately shipped in New York in paper casks. These casks are made by a company which has three works for the purpose—at Hartford, at Cleveland, and at Toledo. Some 3000 are delivered daily; they are painted blue, and have iron hoops, and they are $1 35c. apiece (a price which could be reduced in case of large production). The advantages of these compressed paper barrels consist chiefly in the absence of joints and less loss on that account through leakage; great elasticity and less liability to fracture than where wood is used; lastly, less dilatation, and diminution of expenses thereby incurred. It is said the Standard Oil Company is going to substitute the manufacture of paper barrels for that of wooden ones, which it at present exports in large quantity.

IMPROVED JIGGER CRANK.—An ingenious and very simple adjustable crank has been invented by Mr. JOHN ROBERTS, M.E., of Llanrwst, and the great advantage claimed for it over the ordinary eccentric pulley is that the friction is entirely removed, which is a very important thing where power is a question of cost. Practical engineers admit that the band on an eccentric pulley acts as a brake on a shaft running at a high speed, and especially should it get a little dry, and the larger the pulley the greater the brake power. Many persons have suggested to Capt. Roberts that a crank would be much superior to the pulley, but the ordinary crank could not be adjusted to suit any and all classes of jigging; he has, therefore, designed an adjustable or double crank. The portion of the crank carrying the pin is made of H form, and the shaft is fitted with two [ ]. There is a bolt hole on each side of the H to suit a slot-hole in each bed-plate or L of the crank, which admits of the pin being shifted to the required distance from the centre, and then tightened with a screw. The pins on the end cranks need not be so strong, and requires only one T-head, with simply a pin hole at the other end to keep the plunger-rod from slipping off. Capt. Roberts is using this arrangement of crank, and finds it to work admirably. He is sure that four can be driven with the power required to drive one with eccentric pulleys.

Meetings of Public Companies.

THE BROADWAY GOLD MINING COMPANY.

The statutory meeting of shareholders was held at the company's offices, Queen-street Place, on Wednesday,

Mr. P. CARNEGY in the chair.

Mr. SWAFFIELD (the secretary) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen, as you are aware, this is the statutory meeting, to be held within four months of the formation of the company. Within this time I am very happy to be able to tell the shareholders that we have been able to receive the reports of two other most competent experts besides Mr. Hildreth's, and the reports they have furnished to us on the Broadway property are highly satisfactory. These gentlemen were Mr. Percyvale Taylor (a son of Mr. Richard Taylor, of the firm of Messrs. John Taylor and Sons, who have now accepted and assumed the position of managers of the company), and Mr. John W. Plummer, who has been appointed by Messrs. John Taylor and Sons as superintendent of the mines. Messrs. Taylor and Plummer report that there is a large body of ore actually in sight, and strong indications that the reserves of ore will be largely increased at the present workings in the 75 ft. level in the west side of the mine; moreover, the subsequent advices from the mines are such as to satisfy the managers that the reserves of discovered ore are in excess of the quantity stated in the prospectus. Shortly after the company acquired this property it was found that it was difficult, and, indeed, inexpedient, to use the 18-stamp mill which the old proprietors of the Broadway used to hire, and the lease of which, in case they wanted it, the company had also secured. The reason for not using it was its distance (some five miles) from the mine, and the consequent difficulty and cost of conveying the ore to it during the winter. It seemed, therefore, more expedient to confine reduction work to the small 10-stamp mill, the actual property of the company, until a new mill could be erected in the immediate proximity of the 10-stamp mill—i.e., at the nearest point on the river to the mine itself, and to hasten as much as possible the erection of this new mill. I am very happy to be able to inform this meeting that, notwithstanding the lateness of the season this new 40 stamp mill was contracted for and ordered in time for erection this autumn, and we have every reason to believe will be actually running in less than a fortnight's time. From the fact of not having been able to run the 18-stamp mill, the the amount of work—that is milling work—which has been done on the property since its acquisition by the company, has hitherto been very small, and the returns from the mine have been proportionately limited, but as the mine itself was being opened up all the time that the new mill was being erected, and the reserves of ore were being increased, and facilities were being made for conveying at a cheaper and more rapid rate the ore from the mine by a tramway to the mills, to be ready by the time the new mill was completed, they feel that they consulted your interests best by not giving an extravagant price for conveying the ore by carts to an old mill five miles off, when in a few weeks you could have a new 40-stamp mill of your own, and a tramway completed, bringing your ore a distance of only two miles at a very great reduction of cost. Although this arrangement necessitates the postponement of the date of paying the first dividend, which the directors had hoped to propose, this, it will be seen, is fully compensated for by the larger and more regular profits which should be available when the new mill is at work. The main thing was to secure the erection of the 40-stamp mill before the close of the autumn, and before the frost rendered mason work impossible, for if we had missed building the foundations before we were overtaken by frost, the erection of the new mill would have had to be abandoned till the spring—the month of May in Montana, and the new mill could not possibly have been completed until the month of July, 1882. The directors congratulate the shareholders that this danger has been averted, and that a time contract was entered upon, by which the new mill should be delivered to the company's superintendent ready for working during December. This contract was entered into by Mr. William Bowers, of Salt Lake City, a gentleman personally known to some of the shareholders of this company, and whose reputation as a constructor of mining machinery stands as high, if not higher, than any firm in America. Among others he is the constructor of the mills belonging to the well-known Alice and Moulton Mines. Mr. Bowers has likewise taken the contract for the tramway from the mine to the mill, which is to be completed on the same day as the new mill. The tramway, all complete, is only to cost $10,000, as against $15,000 calculated in Mr. Hildreth's estimates. On the other hand, the new mill will cost $64,000, as against $28,000 mentioned in Mr. Hildreth's estimate. The disparity is accounted for by the omission by Mr. Hildreth of an adequate sum to provide for the building to contain the new mill; the cost of such building being no less than $33,000. It is possible that Mr. Hildreth conceived that the 18-stamp mill belonged to the company, and that the building would serve for the new stamps (the old ones being much worn out), whereas neither the building nor the stamps belonged to the company, which only leased them. Fortunately the margin for the working capital that is allowed in the estimates which were put before you in the prospectus—22,500*l.*—enable the directors to pay for their new 40-stamp mill, to carry on the developing of the mine until the new mill is at work, to pay for wood and provisions required during the winter, and still leave what we hope will be a sufficient reserve of working capital available. I must now mention that it was found that the old proprietors of the Broadway were not getting more than 50 to 60 per cent. of gold from their mill workings, and that no concentrators were used, nor any method employed subsequently to the milling process for getting a larger percentage of gold out of the ore. Messrs. Taylor and Plummer consider that a much larger proportion could be saved if proper methods for that purpose were employed, and they have sent 1000 lbs. weight of the Broadway ore to experts in New York—Messrs. Mustel and Riotti—in order that it should be experimented upon, and the best method of treatment recommended. Mr. Plummer likewise hired a concentrator of the Frue Vanner Patent at Butte City, and sent it to the Broadway in order that he might himself make experiments with it on the spot. A sack of ore has likewise been brought to London in order that experts here may try their hands upon it, and it is hoped before the year is out we shall be able to discover the best means of treating it. Whilst these things have been going on in the Broadway the tunnel in the Mutual Agreement at 100 ft. level has been continued, and the interval which separated the old workings from the spot where the adit was has now been driven through and ore in a mixed state has been reached. In the course of a few days the manager, in his last advices, Oct. 28, hoped more fully to develope this important point. Although this mine (the Mutual Agreement) has never been considered more than a promising prospect, and did not enter ints the estimates for dividends, the news recently received from it may be considered highly encouraging, and it may be mentioned that in the adjoining mine (the Ajax) belonging to another company, separated by only a few yards from the Mutual Agreement, they have, at a depth of only 50 ft. below the tunnel which is being driven in Mutual Agreement, struck a body of ore (in every probability the same vein as the Mutual Agreement) worth about $14 a ton. I cannot conclude this address without congratulating the shareholders on the fact of Messrs. John Taylor and Sons having consented to become the managers of this valuable property. They have consented, too, on conditions complimentary to the property, for they made their consent dependent on the confirmation (by the gentlemen whom they should choose themselves) in its main particulars of the favourable report of Mr. Hildreth. In order to test this they sent Mr. Percyvale Taylor, a son of Mr. Richard Taylor, and Mr. John W. Plummer (whom they conditionally designated as superintendent should they accept the position as managers), and it was only on receiving the favourable reports of these two gentlemen that they consented to be managers of the property. The shareholders are also to be very much congratulated on the superintendent, Mr. John W. Plummer, whom Messrs. John Taylor and Sons have appointed over the Broadway property. He is an Englishman, of 20 years' experience of mining in America, and he and his father have been for nearly 40 years in Messrs. John Taylor and Sons' employ. It would probably have been difficult to find anyone uniting so many of the qualifications for a successful superintendent as are found in Mr. Plummer. Mr. Percyvale Taylor's services were of material use to the shareholders of the company, not only in sending his able report home, but also from his scientific knowledge in suggesting modes of treatment of the Broadway ore, and in insisting on the necessity for dispatch in the erection of the new mill, and forwarding the contract with Mr. Bowers by every means in his power. For these services Mr. Taylor is entitled to the best acknowledgments of the proprietors.

Mr. JOHN TAYLOR said before reading Mr. Plummer's letter he should like to state how much his uncle, Mr. Richard Taylor, regretted being obliged to be absent from the meeting. He was compelled to go to Paris to attend a very important meeting that day. It would be a source of further regret to him that he was not able to acknowledge himself the mention made of the services which Mr. Percyvale Taylor had, in the opinion of the directors, rendered this company. Mr. Taylor then read a letter from Mr. Plummer, which confirmed the Chairman's remarks, and continued to say that his firm did not undertake the management of this company until they had satisfied themselves that it was a concern which would in all probability turn out a prosperous one. The main question with regard to the quantity of ore was fully borne out by the investigations of their agents. With regard to Mr. Plummer, he knew him intimately in Canada ten years ago, and had since that time kept up a constant correspondence with him, and he had, the greatest faith in that gentleman. There was another official connected with the company who occupied an important position, and that was the secretary. It had been a great satisfaction to his uncle and himself that they had been able to place the secretaryship of this company in the hands of Mr. Swaffield, who had been in their offices for 25 years, having entered it in the year 1856. Everything that gentleman had done had been acknowledged as most satisfactory by the directors of the different companies with which he had been connected, and he thought they were quite safe in Mr. Swaffield's hands so far as that part of the business was concerned. He was of opinion that they had a very valuable property, and could look with every confidence to the prospects of the company in the future.

Mr. STAPLES: Can you give us any idea of the value of the ore and cost of production?——Mr. TAYLOR replied that Hr. Hildreth's estimates made out a net profit of something like $15 per ton. Messrs. P. Taylor and Plummer told them that they estimated about $11, but he thought they must wait results, for in two or three months they would be able to tell them what it would be.

A SHAREHOLDER asked what amount of milling was going on, and what amount they would be able to mill when the new mill was completed? He believed they had recently sunk a lower level than the 75. He should like to have an idea of what prospects were down below. The Chairman mentioned that the dividend would not be confiscated. Could he give them any idea when they were likely to receive a dividend?

Mr. BUTLER JOHNSONE said they had only been milling by the 10-stamp mill. When the company came into possession of the property there were two mills at work, a 10 stamp and an 18, but the latter was leased, and it was so old and bad, and far from the property, that it was thought best to abandon it. Therefore, instead of having 28 stamps going and milling ore the company only had 10 stamps, and they were rather light stamps, and instead of milling 2 to 2½ tons per stamp only milled 1½ ton. It milled 15 tons per day, working 25 to 30 days per month, and there being no concentrators a great deal of ore escaped into the tailings, so that he did not think they would get more than 1*l.* to 30*s.* As to the mining below the 75 ft. level, there had been some mining at the 105, but not to any very great extent. That level was a very small one, not much worked, and they were pushing it on still further. He must mention that undoubtedly the ore in the 105 was of a richer description than that of the 75, the deeper they went the richer the ore became, although the difficulty was increased by the sulphurets being more likely to be found than in the higher levels.

Mr. STAPLES asked whether the ore in the 75 held down to the 105.

Mr. BUTLER JOHNSONE could not say for certain, but believed it did. As to the dividend, they could calculate that themselves. If they got 40 stamps at work in the month of December they would be milling at least 80 tons of ore a day, and calculating that at 2*l.* a ton profit there was 160*l.* a day; and multiplying that by 30, they would not have to wait long for a dividend.

A SHAREHOLDER asked whether there would be any cable from the mine as to result of the last run?——Mr. SWAFFIELD replied that instructions had been sent out that a cable should be sent twice a month giving the quantity of ore milled and the results as to the profits made.

A vote of thanks to the Chairman and directors terminated the proceedings.

WHEAL PEEVOR MINING COMPANY.

A four-monthly meeting of shareholders was held at the mine, on Tuesday, Mr. T. PRYOR (the purser), in the chair.

The statement of accounts showed that the labour costs for the 16 weeks amounted to 411*l.*; merchants' bills, 1378*l.*; rates on dues, 132*l.*; dues, 327*l.*; making a total expenditure of 5954*l.* On the other hand, there had been sold 113 tons 7 cwts. of black tin, which fetched an average price of 56*l.* 15s. 6d. per ton, and realised altogether 6397*l.*; extra carriage received, 15*l.*; tin leavings from Oct. 7 to Nov. 23, 318*l.*; showing a profit on the 16 weeks working of 777*l.* There was a balance brought forward from last account of 642*l.*, and adding to this the profit now made, there was a sum to be dealt with of 1479*l.*

The CHAIRMAN added that all the tin credited had actually been sold, and the tin bills were on the table. It would be for the meeting to say what dividend they would declare. The report was a very favourable one, and he thought that between that and the next meeting they would have some very important points to come off, and the mine would then be so far developed as to place it in its position. There was every indication of first-class improvements, as they would all agree with him when they heard the report read by Capt. White. The agents reported as follows:—

The engine-shaft is down 9¼ fms below the 90, and we calculate to complete the sinking to the 100 in four weeks from this date. Our progress in sinking during the past 16 weeks has been far more satisfactory than the previous 16 weeks. Whilst we are sinking we are also busily engaged in preparing for the fixing of the pole at the 90, such as cutting ground for angle bob, and building same. When this is completed and put to work we shall at once commence cross-cutting to the lode in the 100, where we expect to meet with the junction of lodes referred to in our former reports, and where we expect to meet with good results, and at the same time prepare for sinking another lift. The lode in the 90 driving east is the full size of the end, stuff of low quality. About two months since, in driving the 90 west, we discovered a lode coming in from the north. This we cut into, and found it to be about 3 ft. wide, and producing good work for tin. We are now driving east and west on this part, the lode in each end being about the same width, and worth 15*l.* per fm. We are also rising in this for the purpose of opening up stoping ground and effecting communication to the 80. The lode in the rise is worth 12*l.* per fathom. We consider this a good point, being in our bottom level, and a point further east of cross-course than in any of the upper levels. We also look upon this as a very good feature for the 100. The lode in the 80 driving west is improving, and now worth 12*l.* per fathom. The lode in the 80 driving west on middle lode is full size of the end, and worth 18*l.* per fathom. This end for the whole distance driven has opened up a good run of stoping ground. The lode in the back of the 80 east of shaft is worth 10*l.* per fathom. We are also cross cutting for the middle lode at this level at a point 25 fms. west of shaft. We consider this a good point, inasmuch as we have good tribute ground in the bottom of the 70 on the middle lode, a short distance west of the point of intersection. The lode in the 70 driving east on middle lode is worth 15*l.* per fathom. This has opened up good ground the whole distance driven. The lode in the winze sinking in the bottom of the 70 west is worth 20*l.* per fathom. This winze is about 7 fms. in advance of the 80 end. We have passed through Nicholl's cross-course east of shaft at this level, and are now cross-cutting for the lode east of same. The lode in the 60 driving east of Nicholl's cross-course is large, and producing low-quality work. We hope to have an improvement here soon. The ground in the cross-cut driving south at the 60 west has changed during the last two weeks, and shows indications of the lode being near. The same remark applies itself to the cross-cut driving forth at this level. We have six stopes working on tutwork, the lode worth in each 11*l.* per fathom. We have also 18 pitches working on tribute, employing 50 men and boys, at tributes varying from 5s. 6d. to 12s. in 1*l.* Since we have communicated the main rise to surface we have been clearing the same of stuff and cutting down sides, which we hope to complete soon. During the past quarter we have sunk, driven and stoped fully 300 fms. of ground, and cut and completed a very commodious tripplat at the 80, as well as reached different points which we were cross-cutting and rising for at the time of our last meeting, and during the last three months have sunk at the rate of 9 ft. per month in the engine-shaft. We consider the mine, prospectively, has very much improved of late, especially in our bottom levels and on the middle lode below the 60, which we are pleased to say is opening up exceedingly well at all points in operation, and with the present price for tin we hope to show equally as good results for the coming 16 weeks as we have in the past.

Capt. WHITE added that they would see by the foregoing report that they had nearly completed their lift to the 100, and that they had made more satisfactory progress in sinking during this 16 weeks than in the previous 16 weeks. They were well aware that it had been stated in previous reports that had been sent out from that mine that they had a junction that would take place between the 90 and the 100, and it was stated in the report that when they commenced cross-cutting and completed the lift they expected to meet with this junction. They did not anticipate that the junction would take place just directly where the cross-cut would come out, but somewhere between the 90 and 100. They calculated a few fathoms above the 100. However, they might reasonably expect some influence in the junction when they reached that point. Another great feature in connection with the mine was that the lode had improved in the 90, west of the shaft. This they looked upon as a very important point, inasmuch as they never had such an improvement so far east of cross-course. This consequently showed that the dip of tin in this mine down was towards their engine-shaft. By this we gave greater importance to the junction of the two lodes between the 90 and 100. At the time of our last meeting they had different points in operation to accomplish, such as the lode east of the cross-course at the 60, and communicate to the main rise to surface, and this they had completed, although the lode east of the cross-course at the 60 had not opened up as well as he anticipated. However, they had opened a large lode there, and they hoped it would improve upon what it was now. At the 70 they were cross-cutting for the same lode, and there they expected to meet with the lode more

productive than at the 60, being, of course, 10 fms. deeper. He thought, considering the points that they had in operation, the mine was really in a better position than it was at the last meeting, and he thought they might look forward to the next 16 weeks to raise about the same quantity of tin as they had now. He would not say more at present, but if they could return more they would be only too happy to do what they could to increase the returns. Taking the mine generally, it had greatly improved during the last quarter. (Applause.)

Capt. WHITE, in reply to Mr. PERMEWAN, said they had about 2 fms. to drive to cut the lode at the 100, and they would then drive the cross-cut further north about 7 fms. He believed the new part would be cut, and that part would go right behind the shaft. It looked like the main part of the lode. They would rise at right angles from the 90 to the 80, and communicate with the same level. Respecting the fixing of the pole, they calculated to complete the lift to the 100 and when this was completed they would at once commence to fix the pole, and he thought he could safely say that they would be in a position to put the pole to work in about 10 weeks from that time. He would not recommend cross-cutting to the 100 until they had that work done. In about a fortnight after fixing it they would be able to cut the lode at the 100, which he considered a most important point.

Mr. THOMPSON asked whether they were discovering as much tin as they were taking away.——Capt. WHITE replied that he should think they were. They had employed on the mine altogether 319 hands. There were engaged on the middle lode on tutwork 26 men, and out of the 18 pitches working on tribute they had 11 working on the middle lode, and the chief portion of these were from the 60 to the 80, and the whole of the tutwork on the middle lode was from the 60 to the 80. Two-thirds of their tribute pitches were on the middle lode. On tutwork and tribute working on this lode there were 57 altogether. On tutwork and tribute in productive ground there were 117 men and boys. They had 26 men sinking shafts and driving cross-cuts, and out of the total number he thought they were really discovering fully as much or more ground than they were taking away. (Applause.)

Mr. P. BLAMEY remarked that the rates on dues were very high, and the CHAIRMAN remarked that it was unjust that the mines should pay the rates at all. The lords ought to pay them, but they took care in their leases that the mines should pay everything but the income tax.

Mr. THOMPSON moved the adoption of the accounts and report. The report was a better one than he expected. It pointed out what they would have during the next four months, when they would find themselves in a very different position to what they were now.——The motion was seconded by Mr. BLAMEY, and carried unanimously.

The CHAIRMAN said the next question was the dividend. He wished they were in a position to show a larger profit, but he was sure the agents had done their very best during the four months, and he looked forward to seeing a much better position at the next meeting. They had sold their tin very well during the last four months, averaging 56*l.* 15s. 6d. per ton, whereas at the last meeting it was 51*l.* 19s. Their stuff was not quite so good as it was, but at present they were getting about 60*l.* per ton, and he did not see that their costs were going to increase. The quantity was not quite so much as it was last time. It had been suggested that they should give a dividend of 5s. per share, which would absorb 750*l.*, and there would be 28*l.* added to the balance, which would make their balance 670*l.*, in round numbers. He did not see that they could go beyond that, because that was just what they had carned, and that had always acted on the principle of dividing what they earned, and making calls to pay their losses.

Mr. THOMPSON did not think they ought to divide more than 5s. When things were going down let them get to the bottom as soon as possible, and he thought they had got to the bottom as far as dividends were concerned. They had been taking a little from the balance now and then to make up previous dividends, but he did not think they should do it any longer. He took a very hopeful view of the mine from what he had heard since he had come to Redruth from a gentleman whom he saw that morning, who gave him a better opinion than Capt. White had done in his report, and had full confidence in the opinion of the gentleman he referred to. He thought Capt. White had rather understated one or two points, but it was better that it should be so, rather than excite undue expectations at the coming meeting. He believed that when they met again they would have very hopeful prospects. Of course, time would have to be taken to fix the pole and cross-cutting, and their returns might not be as much as they desired, but it would be making progress for the future, and eight months would show that Wheal Peevor was an improving property as time progressed. (Applause.)——The motion was seconded by Capt. PENTREATH and carried unanimously.

The CHAIRMAN reminded the shareholders that at the last meeting a committee was appointed to meet the West Peevor committee respecting the taking up of some levels. The committee met on two or three occasions, and Capt. Rosewarne, the agent of the lord, the Rev. St. A. H. M. St. Aubyn, had been underground. The committee afterwards met, and drew up certain resolutions contingent on the lords giving permission for the levels of that mine coming into West Peevor, and also drawing some stuff from West Peevor by the engine of Wheal Peevor. Capt. Rosewarne had told Capt. White and himself that, as far as he was concerned, he saw no reason why the suggestion should not be carried out. He had seen Capt. Rosewarne repeatedly since, but had never been able to obtain a definite reply from him; therefore, the matter stood in the same place as before. The committee met again that morning, and they thought that as Wheal Peevor was drawing the water from West Peevor, it was only fair and reasonable that mine should be asked to contribute to the water charges of this mine. As purser of both mines, he could not see any injustice in the proposition, and the committee suggested, in view of West Peevor meeting next week, a resolution should be passed asking the shareholders in the latter mine for a portion of the charges, and empowering the committee to arrange terms with them. The resolution was as follows:—"Inasmuch as West Peevor has been, and is now being chiefly drained by Wheal Peevor at considerable cost, that the West Peevor adventurers be asked to contribute to pay a portion of such charges, that the present committee of Wheal Peevor be requested to bring the matter before the next West Peevor meeting of shareholders, and that they be and are hereby empowered to arrange terms." The Chairman was afraid that so far as making any arrangements for amalgamating, or having levels driven up, would be a very difficult matter, seeing that they had so many lords in West Peevor Mine. He for one would be very glad to see it done.

Mr. THOMPSON said he attended the meeting of the committee, and the matter was discussed thoroughly. He was opposed to a communication being made between the two mines, but the opinion of the majority of the committee was that they should grant the concession, coupled with the request that West Peevor should pay them 40*l.* a month towards water charges until they were able to draw their own water. Application had been made to the lord, but their lord had not deigned to give them an answer. He was astonished at this. It was not the kind of conduct which he should expect to come from a lord who was receiving 327*l.* in the course of four months from them. He was, he repeated, astonished that the lord had not the courtesy to give them some reply or other to their communication, which was put in very respectful terms. There must also be consent obtained from the lords of West Peevor, and any one of them could prevent the communication.

Mr. J. HITCHENS moved the resolution, and remarked that every effort should be made by the executive of that mine to get the arrangement carried out as soon as possible.——Mr. H. T. DAVEY seconded, and the resolution was carried unanimously.

The CHAIRMAN said there was an Employers' Liability Assurance Corporation established for the purpose of taking the risks which fell upon employers, under the Employers' Liability Act. The directors were all men of high standing and well known, and the risks were taken for a nominal sum. Many mines had transferred their risks to this company; and it had been suggested that they should adopt a resolution at that meeting to insure their men against all accidents and risks, which they could do for 15*l.* or 16*l.* a year. If a fatal accident occurred the Act of Parliament would make them pay 100*l.*; and if a company would take such risks for a mere nominal sum, he thought they would be wise in adopting a resolution to this effect—That the purser be requested to arrange on the best terms with the Employers' Liability Assurance Corporation for the men working in the mine to insure against accidents and other risks, for which the adventurers were liable under the Employers' Liability Act of 1880.

Mr. WICKETT, who, with Mr. Abbott, is the local agent of the company, said the insurance was 2s. per man per head per annum. At present it was difficult for adventurers to find out what their liabilities were, but nearly every case that had been brought forward had gone against the employer. In one case 160*l.* had to be paid, which was equivalent to three yeaas wages of the man who was permanently injured by machinery which was apparently perfect.

Capt. PENTREATH proposed the resolution, and it was seconded by Mr. CLINTON, and carried unanimously.

Mr. WEST remarked that at Hayle Foundry and Works they had insured against all accidents.——On the motion of Mr. THOMPSON a vote of thanks was passed to the Chairman and to Captain White and the business then concluded.

The adventurers afterwards dined together, the Purser again presiding.

After dinner Mr. THOMPSON proposed "Success to the Mine," and said he remembered the dividends there going up from 5s. to 1*l.* 12s. 6d., and he hoped and believed he would have similar experience again.

Capt. WHITE responded.——Capt. KING and he would rather the dividend that day had been 5os. than 5s., but they had done their best. He believed Wheal Peevor had still a good future before it, and he saw no reason at all for the shareholders to be discouraged in any shape or form, respecting the future of Wheal Peevor. In the days of the greatest difficulties and trials it managed to pay its way to give a little remuneration to those who had laid out their capital in it, and he believed the mine would continue to do that in the future. Their bottom level in the 90 was very much improved, and the point he looked to was the 100, they should have a great improvement there. (Applause.) According to the present appearance of the 90, they should have in the 100 one of the best levels in the mine. In sinking their shaft this quarter they got along a great deal better. Last quarter they had several breakages, which always will happen in mines. If they got good speed they hoped in another 10 weeks to reach the 100, and when they cut the lode he believed the returns would be considerably increased upon what they had been during the last 16 weeks. Their middle lode was opening up very satisfactorily indeed, and he believed they would have a good lode at the 80 when they cut it. They had set a cross-cut and they calculated to cut the lode there in about six weeks, and should it open up as well as west of the cross-course, they would then have a good future before them. Although there had been only one fatal accident at the mine since he had been there, now six or seven years, he was glad the resolution was passed to insure the men, as it took some weight off his shoulders.

Capt. KING also responded, and spoke highly of the bottom of the mine, and said he believed there was a great future before Wheal Peevor. He believed there was as much tin in Wheal Peevor for 10 fms. in depth now as there was when they were paying very much larger dividends. (Applause.)

Mr. WEST proposed in eulogistic terms "The Health of the Purser," and Mr. PRYOR, in responding, said they had called up there 23,000*l.*, and they had not only paid back their capital, but some thousands of pounds in addition. He had noted down some figures which might be interesting to them. Many gentlemen said Wheal Peevor was not in a tin district, but these figures would disprove that, and they would show besides this that that district was only in its infancy. He believed those mines which were starting up around them would be returning as large quantities of tin as in any other district. At present they were only at a depth of 100 fms. in Wheal Peevor, and that was only the depth of some adit mines. They had large lodes, rich work, and they could return the stuff as cheaply as any mine in Cornwall. For some four or five years they had been able to return their tin for 28*l.* per ton. From the commencement up to that day 2509 tons of black tin had been returned, which realised 108,522*l.* They had also sold tin leavings to the amount of 9800*l.*, which he estimated to produce about 200 tons of tin, making the total quantity 2710 tons. That quantity being produced since 1873 proved that they had a great tin district there It had produced in money no less a sum than 120,000*l.* They had raised that value of mineral by calling up 22,000*l.* He thought gentlemen would do better by coming into the Peevor district with their capital than going to the Indian gold mines. With regard to the lords, an application had been made to them for a temporary arrangement, which would be of no disadvantage to them, and would be of great advantage to them in working that mine. He thought they had been treated very discourteously in the matter—(hear, hear)—and he hoped it would be taken up, and that it would be heard of in the proper quarter. Without speculating one sixpence the lords had from that mine nearly 6000*l.*, and he thought this entitled them to a little more consideration than they had had from the lords of the mine.

Messrs. A. Richard, West, and J. Hitchens, responded for the merchants, and Mr. Thompson for his own health.

Capt. WHITE mentioned that the tutwork men and tributers were averaging at that mine 4*l.* each per month.——The meeting then broke up.

DERWENT LEAD MINING AND SMELTING COMPANY.

The annual general meeting of shareholders was held at the company's offices, Austinfriars, on Thursday,

Mr. WILLIAM EDWARDS in the chair.

Mr, J. H. A. SMITH (the secretary) read the notice convening the meeting, and the statement of accounts to July, showing a credit balance of 5722*l.* 3s. 3d., and report of the directors were submitted:—

The directors reported that during the 12 months embraced in the accounts the sales of pig-lead were 221 tons, which realised 3713*l.* 3s., against 368¾ tons sold in the previous 12 months for 6446*l.* 16s. 3d.; the average price obtained for the lead being 15*l.* per ton in 1880-81, and 16*l.* 5s. 5d. in the preceding 12 months. This reduction in price and quantity of the returns, combined with the exploratory works which have been vigorously carried on, has occasioned an excess of expenditure over receipts for the year. At the last general meeting Mr. Morpeth expected very satisfactory results to be obtained from the trials then in progress in search of the north vein in the little limestone and coal sills. A vein has since been cut which the agents are inclined to believe is not the true north vein, in which case there is probably a good lode further to the north standing whole, or almost so, throughout the entire sett. The north lode, which at the date of the last annual report had just been reached in the great limestone, has since been largely operated upon with gratifying results Levels have been driven east and west and are opening up good stoping ground, from which additional returns will be obtained as the ends go forward. It may also be remarked that in accordance with the expectations expressed at the last annual meeting the ore obtained from this vein contains a larger quantity of silver than that from the middle vein, and is proportionately more valuable. The 95, east on middle vein, is now approaching the run of ore ground which has gone down in the 80, and in the course of two to three months an important improvement may be anticipated.

The directors think it right to mention that there are believed to be very valuable lodes to the south of the workings, which the necessity for economising the capital has prevented their testing. They are, however, informed that a trial commenced some years ago on land adjoining the southern boundary of your sett to prove the same lodes is now likely to be continued, and if successful will greatly enhance the value of this portion of the company's property. It is estimated that these veins might be tested by continuing for about 130 fms. a cross-cut already driven about 100 fms. from Westgarth's shaft. With the aid of the boring machinery now on the mine this work would probably be completed in 14 months, at an expenditure of about 800*l.* The attention of the directors has also been called to the desirability of proving the ground to the east of Taylor's shaft, but after consultation with the manager they are of opinion that this would require a larger amount of capital than could at present be afforded by the company.

The evident revival in trade, though as yet slow, and the considerable advance in the prices of some of the metals, which there are signs that lead is about to follow, together with the ample scope for successful operations in untouched ground in the very extensive and important property held by the company, not only on the lodes which have already yielded large returns and profits where thoroughly worked, but also on other promising lodes known to exist in the sett, all combine to give the directors hope that vigorous operations will yet bring the undertaking to a successful issue.

In accordance with the resolutions passed at the extraordinary general meeting on July 13 steps were taken to secure a further period for the exercise of the option to purchase the freehold of the minerals, but no extension of time beyond Sept. 1 could be obtained. The directors, therefore, accepted the title, and agreed to complete the purchase in pursuance of the second resolution passed at the above-mentioned meeting.

The manager (Mr. John Morpeth) reported that the energetic spirit which characterised the company's movements in former years has been continued with unabated vigour for the 12 months ending with June of the current year. Indeed, the figures compared with those in last year's report show an excess of expenditure on tutwork to the amount of 355*l.*, while on stoping the expenditure is 774*l.* less, thus partly accounting for the diminution in the returns. The expenditure underground, haulage excepted, was 3537*l.* 9s. 10d. The quantity of ground wrought was 625 fms. 1 ft. 5 in.; of this 568 fms. were productive, and yielded 1184 shifts bouse, produced 345⅞ tons of ore, an average about 12 cwts. of ore per fathom, or nearly 4 per cent., average cost 4*l.* 15s. 6d. per fathom. Unproductive ground explored 57 fms., average cost 5*l.* 3s. 3d. per fathom. The reserves of stoping ground are about the same as last year, 800 fms. The cost per ton of dressed ore ready for smelting was about 1*l.* 13s. 6d., and the 345⅞ tons was smelted at an average cost of 1*l.* 1s. 11d. per ton, and yielded 221 tons of lead containing 3460 ozs. of silver less 1332 ozs. for desilverising, leaving 2128¼ ozs. net, which with the lead sold for 3713*l.* 3s. The produce of lead in the ores was about 64 per cent. The price of lead continued so low there was no inducement to clean the flues, hence there are two years' accumulation of fumes in them. These figures do not compare favourably with those of last year, owing to the stuff treated being of lower quality. The number of hands at present employed is 86 underground, and 26 men and 26 boys at surface, equal to 112 men, and 26 boys.

At the last annual meeting it was foretold that the ores from the north vein, then recently cut, were likely to be worth quite 1*l.* per ton more for silver than the other ores. At that time the silver assay was 16 ozs. 6 dwts. 16 grs. per ton; at present it is 19 ozs. 8 dwts., and will go higher It is hoped as the north vein is more extensively worked. The workings are worth in the aggregate at present 9 tons 3 cwts. or 16 cwts. 2 qrs. 20 lbs. per fathom on the averuge, and the average price at which they are set is 4*l.* 19s. 3d. per fathom. The north vein in the great limestone is of a character, both as regards size and productiveness, that, taking the middle vein as a precedent, would induce the belief that in the little limestone and coal sills this north vein should be very rich—but so far as proven it is not so. It is probable, however, that this vein is an intermediate one, and not the vein we started for from Westgarth's and if this be so (and we incline to that opinion), a good lode may still be in advance of us, and will be whole from surface downwards, and nearly so from end to end of your territory. The 79 cross-cut is still going in search of it. In conclusion, he expresses the hope that better times are not far distant for the concern.

The CHAIRMAN said: Gentlemen, in moving the adoption of the report for the year just closed, I have to express my regret that the result of the operations during that period has not been more favourable. As set forth in the report, it must be palpable to all who have any interest in this company, the directors have had a very serious time, and a very awkward time, to deal with. First of all, the weather was so very severe in the North last winter that for some time it brought all operations to a standstill; so much so, that in the months of January and February there were no returns of lead made; and it so reduced the output for the months of April, May, and June that it has been the means of reducing the output on the year nearly 50 per cent. compared with the previous year. These facts, I think, considered together with the very low price for which the lead has been sold during the year, has placed the company in its present position. During the year 1879-81 lead sold on the average at 16*l.* 5s. 5d. per ton, but recently the price was only 15*l.* per ton. The short price and short output had been very detrimental to the company during last year's operations. I must say that everyone connected with the management of the mine has done all that could be done to alter the state of things, but it had been out of their power. The general falling off of the produce, and the low price, as I said before, are the causes of all that in a financial point of view. I am glad here to say that during the past few days a discovery has been made at a point where it has been looked for, or nearly so; so if it only continues to turn out as well as the people in the neighbourhood who know the mine, the land, and the strata, expect it will be a very excellent thing for the company. The manager is here, and will be very glad to give any explanation on these points. I can only hope that our expectations will be fully realised; and if it should be so it is a very excellent thing for the company.

A SHAREHOLDER: In what level is that discovery?——The CHAIRMAN: In the 95. Here is a report on the subject, which we will have read. In conclusion, the Chairman moved the adoption of the directors and agents' report and the accounts.——Mr. LAMB seconded the motion.

Mr. SCHOFIELD said there were no returns in January and February, and reduced returns in March, April, and May, yet there seemed to be scarcely any accumulation of mineral, and the expenses seem to have been going on at almost the same rate. He went on to express his dissatisfaction that money which should have been paid for the purchase of the freehold of the royalty had been devoted to the working expenses of the mine.

Mr. HILL also thought it wrong that the money had been expended on work ing the mine which should have been paid for the purchase of the property.

The CHAIRMAN said it was true the expenses had been going on, though they had been somewhat reduced. There had been certain dead expenses which must be kept on as long as the mine was kept open. It would cost as much to stop the mine keeping the water out and the workings in repair as to keep the works in full operation. He ought to point out that in the months of January, February, and March there had been a reduction of about one-third in the cost-sheets.

Capt. JOHN MORPETH said they had had terrible weather to contend with. On one Sunday last January there were 30 men at work shovelling away snow to enable coals to be taken to the engine.

Mr. SCHOFIELD asked what the engine cost per month?——The SECRETARY said 50*l.* per month for coals and two engine men. He added that he would like to draw their attention to the important improvement which had been alluded to, and of which Mr. Morpeth would have more to say. They would see from the section that they had a run of poor ground in the 80 similar to that in the 95, and they might hope that the ore now cut was the commencement of another good deposit. Mr. Morpeth had told him that he had seen nothing like it for 15 years. At the north vein too at the 93 the trial was resulting very satisfactorily; some ore had already been obtained, and as they were able to increase the stopes more would be got. It should also be remembered that the level was driven at the bottom (usually the poorest part) of the sill, and that the ore from this vein was worth nearly 1*l.* per ton more than that from the other lodes owing to the increased quantity of silver.

Mr. KERLY said the directors had done that which as business men they were bound to do; if they had not acted as they had done they would risked getting into trouble. It was no fault of the directors that the purchase of the freehold was not completed. At the time it should have been completed the lessors could not make out the title, and the directors were months fighting before they could get it. In the meantime the mishaps came, and they had not money to meet them; it was a question of salvage, and the directors very properly, as he contended, used the money which was intended for the purchase of the freehold in expenditure on the mine, and in preventing it from filling with water. If the directors had used the money in the purchase of the freehold he should have advised them that it was their duty to raise money to keep the mine going.

Mr. HILL said he thought the directors should have called the shareholders together at the time, and explained the position.

The SECRETARY then read the report of the agent, as follows:—

Nov. 29.—I beg again to write you a monthly report on these mines:—Jeffrie's Shaft, Middle Vein. The 95, 114 east of shaft, as regards produce is without change, being worth 1¼ ton of ore for full width (9 ft.); the end is hard and slow, and is now being driven by 10 men. The flat discovered by the No. 1 stope in the immediate back of this level, a few fathoms back from the present end, has very much improved since my last report, worth 2½ tons excellent ore per cubic fathom; this is on the north side of the vein. South of vein this flat is being operated on at two points, and worth in one place 24 cwts. ore per cubic fathom, and in the other 20 cwts. The sides being stripped down over the same level 20 fms. back from the forehead, are yielding 15 cwts. ore per cubic fathom. —Westgarth's Shaft, Middle Vein: The stope over the 93, east of shaft, is worth 12 cwts. ore per fathom; vein 2 ft. wide.—North Vein: The 93 on this vein, east of the rise opposite the shaft, is 4 ft. wide of vein, composed of limestone, a little iron, some blende, and spots of lead ore. The same level west of rise, though poor, is a very promising end; the vein is quite 4 ft. wide, containing a vast quantity of fluor, spotted with lead ore nearly throughout the whole face. In the back of this latter level we have three stopes; vein 4 ft. wide in each. No. 1 produces 14 cwts. of ore per fathom; No. 2, 16 cwts.; and No. 3, 14 cwts. In the back of the former level the two stopes yield 15 and 14 cwts. ore per fm. respectively; vein 4 ft. wide. The cross-cut at the 79 from Westgarth's is without change. Machinery all going very well.—JOHN MORPETH.

Capt. MORPETH said the best ores came up last week that he had seen for 15 years. Some little time since he felt depressed, but he was now in better spirits, and much encouraged for the future. For 12 months they had been struggling through barren ground. In No. 1 stope they had discovered a flat going horizontally, which last week was worth 40*l.* per fm, and could be obtained at a cost of 3*l.* 10s. The value had fluctuated a little, and it was now worth about 28*l.* It was a profitable point, but at present they could not get more than six men in. They were pushing on the level with ten men; when they got in and opened upon that he hoped to have better returns. He hoped the lode in the upper sill would hold down. West of the shaft they had put out a cross-cut in the 93, and cut through a strong lode and commenced to rise. The level going west was 4 ft. wide, composed of fluor-spar, very kindly. A fortnight ago there were small specks of ore, but now they were got the size of a nut.

Mr. BURLS said he could bear testimony to the most rigid economy being exercised in the mine by Captain Morpeth, both as regards the work and the price paid for labour. The stores are carefully looked after, and certainly as far as the expenditure at the mine was concerned they had nothing to complain of. In Capt. Morpeth they had a man who gave his whole time and energy to the mine. At the same time he must say he thought the company had paid a large sum for the mine.

Mr. SCHOFIELD said he did not think it was a large sum for the property if there was good machinery.

Mr, KERLY said the machinery alone must have cost far more than the money paid for the mine.

Mr. SCHOFIELD said the London Lead Company used to work the mine.

A SHAREHOLDER: Then you have a good property there?——Mr. KERLY: Yes. The resolution for the adoption of the report was then put and carried.

A SHAREHOLDER moved that Mr. Samuel York be re-elected a director. He said that Mr. York had been energetic in his endeavours to make the company a success, and had done all he possibly could to promote the welfare of the shareholders. (Hear, hear.)——Mr. BARTON seconded the motion, which was put and carried, and Mr. YORK acknowledged his re-election.

The auditors were re-elected, and the meeting broke up, with the usual compliment to the Chairman.

DEVON FRIENDSHIP MINE.

IMPORTANT MEETING AT THE MINE.

On Saturday last several of the directors and a large number of shareholders of the above mine, with several ladies and gentlemen of the neighbourhood, met to formally start and christen the new and handsome wheel which has been recently completed by Messrs. Pearce, of Tavistock, after a design by the well-known firm of Messrs. Loam and Son. The wheel, which is generally acknowledged to be one of the largest in Devon and Cornwall, measures 40 ft. in diameter and 10 ft. breast, equal to 100-h.p. The christening ceremony was performed by Miss Margaret Champernowne (sister of the rector of Marytavy), who acted on behalf of her aunt, Miss Emma Buller, who was unable to attend, and after whom the wheel was christened, "The Emma Wheel." The company included Mr. J. H. Murchison, F.R.G.S. (Chairman of the directors), Col. Sharp and Mr. H. W. Lamb (directors), the Rev. W. Champernowne, Mrs Champernowne, Miss Champernowne, Miss Margaret Champernowne, Miss Ilbert, Mr. Ilbert, Rev. S. Andrew, Messrs. Williams, A. E. Cooke, J. H. Crofts, F. R. Wilson, F. F. Powell, and J. H. A. Smith (secretary), London; Miss Daw (Norway), whose father is manager of the Bratsberg Mines in Norway; Capts. Chas. Thomas, of Cook's Kitchen (managing agent of Devon Friendship), Gill and Tredinnick (agents); Messrs. Bewes and J. Hillard (agents of Mr. Buller, lord of the property); Capt. Waters, of Roman Gravels, Salop; Mr. A. Lanyon (Redruth), Mr. and Mrs. James (Marytavy), Capt. Skewis (managing agent of Gunnislake Clitters, and other mines in the Tavistock district), Messrs. Loam and Son; Major Mathews and Messrs. J. and H. Pearce, W. Criper, J. J. Daw, and Rosewarne (of Tavistock). Before describing the proceedings of Saturday, it may be well to give a few particulars with respect to the property. Mr. Murchison and Capt. Daw acquired it of the late proprietor, Mr. Lanyon. Capt. Daw having worked underground at these mines in his younger days is perfectly acquainted with the property, and the shares which he has taken in connection with the present company are a sufficient indication of the faith he has in the success of the undertaking. The wheel which was started on Saturday is equal to 100-horse power, and is capable of draining all the water likely to come from the old mine as well as Bennett's shaft, to which the present company's operations are chiefly directed. It is well known that Devon Friendship, or Wheal Friendship as it was formerly called, was at one time one of the most famous mines in the country, and for a good part of a century it was perhaps the richest copper mine in the kingdom, and paid from three to four hundred thousand pounds in dividends. At that time the mine was worked exclusively for copper, and on only one lode, arsenical mundic being then quite worthless. There are now large quantities of this arsenical mundic not only in the great heaps at surface, but broken underground, which are now available. When the mine was worked before the mundic was as much as possible left underground and put in "stulls," or large openings whence copper had been taken, as it was not worth the expense of bringing it to surface. However, a good deal had necessarily to be raised, and both these sources will be available to the present company, who have sold slightly under 3000*l.* worth of tin and arsenic since March last. The copper of this mine is rich, yielding something like from 10 to 15 per cent., which is considerably above the average value of English copper; and Capt. Skewis, who has had vast experience in the mines of Devon and Cornwall, says he is satisfied that when the copper is got under the mine will prove rich for tin, and, to use his own words, become the Dolcoath of the district. Since the mine has been under the present company new works have been constructed in order to economise labour, including the water-wheel and a line of tramway. Notwithstanding the storm of wind and rain which prevailed, the interesting ceremony of Saturday was witnessed by a vast crowd of spectators. The ladies arrived in a carriage, and were at once conducted by Mr. Murchison to the scene of operations. Everything being ready, Miss Margaret Champernowne took up a position close to the huge wheel, and a moment after it had been started hurled the christening beverage at it so effectually that the bottle was shivered into a thousand atoms, and as she declared the name of the monster a shout of lusty Devonshire cheers greeted the performance. On the suggestion of Mr. Murchison cheers were afterwards given for Messrs. Loam and Son. Mr. Loam, sen., responded, and alluded to the graceful manner in which the ceremony had been performed by Miss Champernowne. He also expressed his great satisfaction with the manner in which the Messrs. Pearce had executed his design. Capt. Waters then proposed three cheers for Mr. J. H. Murchison, which were heartily given, and that gentleman alluded to the favourable circumstances under which the company had been started, and to the excellent prospects which were afforded of dividends. Cheers were also enthusiastically given for the Messrs. Pearce, who had manufactured the wheel, and Mr. J. Pearce made a few observations in reply.

A meeting was afterwards held at the account-house, on the mine, Mr. J. H. MURCHISON presiding. In alluding to "The Lord" he (the Chairman) said the company had to thank him for the liberal dues and royalties which they had to pay, and which were very favourable compared with those which had to be paid by the old company. The company wished to go on with the Lord in a cordial manner, bearing in mind that their

interests were mutual, because when the company realised profits the lord participated in the same.

Mr. Hillard replied as the representative of Mr. Buller, and said there had been difficulties in starting the mine, some of which the company had had to overcome, and some of which he had had to overcome. He hoped that now all difficulties would disappear, and that the mine would become a source of profit to landlord, lessees, and all connected with it. He had an impression that the original rate of dues was 1-15th, but now he believed it was reduced to 1-30th. (Applause). He trusted that nothing beyond a reasonable rate of dues would be demanded by Mr. Buller, as he was sure it would be to Mr. Buller's interest, as well as to the interest of the company, that only a reasonable rate of dues should be demanded. (Hear, hear.)

The Chairman next proceeded to give some details of the position and prospects of the mine. He said a few months ago he had stated in that room some particulars with regard to the previous history of that mine, which, of course, were familiar to a good many whom he had addressed on that occasion, as they were inhabitants of the neighbourhood. Many of them were able to remember the enormous quantity of copper of rich quality which used to pass through Tavistock, and at the last meeting Mr. James Pearce said the people of Tavistock used to look with pride upon the splendid horses which went through Tavistock carrying the ores from that mine to Plymouth. Since then things were much altered. They now had a railway, by means of which the ore could be delivered much more cheaply and expeditiously. When the mine was in its former glory the object of the proprietors appeared to be only to work it for copper, but that copper was of very high quality, yielding from 14 to 15 per cent. The original proprietors threw aside the arsenical mundic, which was then of no value; they also threw aside much of the tin, and thought little or nothing of any metal from the mine but copper; but from that source they made very large profits. The present adventures also hoped to make large profits from copper, but in addition from arsenic and tin. The lode which the former proprietors worked was called the north lode, and it was there that they made their great returns, but they also drove a long cross-cut to Bennett's lode, where they also found very rich ore; and he believed from this lode the present company, who were going to work it more efficiently than the former adventurers could, would realise large returns. (Hear, hear.) But independently of copper, arsenical mundic had recently become very valuable, and it existed in enormous quantities in the great burrows which they saw on the surface of the mine. Many of them who had been over the mine that morning had witnessed large quantities of stuff being taken from the heaps direct to the crushers. They were also getting a little tin and some rich copper from those heaps. The large water-wheel which they had seen started that day was a credit to the engineers and manufacturers. (Hear, hear.) The ceremony of christening was said to have been performed in a masterly manner. (A laugh.) It was certainly very nicely performed, and he would again take the opportunity of thanking Miss Champernowne for performing the ceremony so ably and so gracefully. (Applause.) That wheel was not only powerful enough to drain Bennett's shaft, but also, if necessary, to drain the old mine. As, however, the north lode was such a distance from the south lode it would not be possible to drain the old mine unless there was a communication between the north and south lodes. They must hope that such a communication existed, and if it did he was told upon the very best authority that they might expect to find at least 500,000 tons of arsenical mundic broken in the levels. The old mine was 240 fms. deep. If the water should be drained from it they would at once reach very valuable property in the shape of arsenical mundic. They were not going to raise the quantity he had mentioned at once, so Mr. Lanyon and other gentlemen engaged in the arsenical trade need not be afraid. (A laugh.) They did not wish to put the price of mundic or arsenic down, but they hoped it would keep up. If they could only sell a fair quanity every year what a long time their store would last. He believed they would be able to return from all parts of the mine a larger quantity of tin than had hitherto been raised in the mine. The old proprietors did not pay much attention to the tin. He believed they would soon have another parcel of tin ready for sale. Capt. Skewis would presently have something important to say about the bottom of the old mine with regard to tin. Capt. Skewis had had the advantage of examining the bottom of the mine just before it was purchased by Mr. Lanyon, and had expressed an opinion that it would be the Dolcoath of the district. That showed the great prospects of the mine. It would require a great deal of consideration and attention, and would tax the abilities of the managers of the mine very considerably to render all these riches available, and obtain the returns in the most profitable manner with the least possible cost. It was usual to have a ceremony such as they had had that day in starting a wheel, but the directors thought they would not put the shareholders to the expense and trouble of merely seeing the wheel started, and so they had deferred this meeting until now that they might have something further to report upon, and he was happy to be able to tell them that the 30 fm. level under adit was driven 45 fms. east of Bennett's shaft, and the lode in the end was 4 ft. wide, yielding good returns of arsenical mundic and some copper ore. He believed that before long the returns would be very great. They had sold already from the leavings of the former company not much less than 3000*l.* worth of arsenic and tin. He was not going to enter into the general fiscal arrangements of this country, because he knew very well that there were some there who would question things he might say. He believed, however, that whatever their political views might be, there was one point on which they would all agree—that the more they could get for their minerals the better they would be pleased and satisfied, and that any steps they could take or measures they could advocate for the purpose of getting a higher price for their produce were certainly within their province. (Hear, hear.) They heard people talk of Free Trade, and Fair Trade, and many people were ardent free traders in a general way, but when you came to what touched their own pockets they were protectionists. (Hear, hear.) If they changed fair trade into fair play he thought it might more effectually appeal to the minds of Englishmen. They would not, however, care what it was called if they had fair play, and he did not think it was fair play that we should allow the products and manufactures of other countries to be brought here and allowed to compete freely with the productions and manufactures of this country when those countries levied heavy prohibitive duties on our own metal wares, and thus greatly limited the markets of our manufacturers, and prevented them giving fair prices for our ores; aggravated also, as he had said, by the competition in our own markets by the foreigners who paid no duties to this country. And, which countries were the most determined Protectionists? Why, the so-called liberal Republics of America and France, the latter of whom would not even listen to the soft voice of Mr. Gladstone, and adopt reciprocity, but the very attempt to carry out which was practically an acknowledgement by the right hon. gentleman that the present system was unfair. (Applause, and some dissent, and a voice: Are you in possession of information of the non-settlement of the French treaty?) All he could say to that was that it was taking a long time to settle. Whenever the English exported their articles manufactured from the minerals raised in this country a most prohibitory duty was imposed by other countries, which prevented our sending our goods abroad, and shut us out from the markets of the world. The Chairman concluded (amid much cheering) by asking Captain Charles Thomas (the manager), and Captain Gill (the agent), to give their opinion of the mine.

Capt. Thomas said that Devon Friendship sett was 1½ mile long, and about 1 mile wide. They had in connection with the mine the Old Friendship lode, Kent's lode, and Bennett's lode. After alluding to the enormous returns which had been made from the two former lodes, he said he believed they would find large deposits of copper and mundic in Bennett's lode. They had driven at the adit, 150 fms. through a very fine looking lode, which would yield something like six tons of mundic to a fathom. Ground could be driven at 3*l.* or 4*l.* a fathom, and the winze was sunk between 16 and 17 fms. Their prospects were very cheering. Devon Friendship stood on the same granite range as Dolcoath and other noted mines, and if they would only give it a little time to develope they would soon have a property second to none in the two counties.

Mr. A. Lanyon, who was obliged to leave for a train, said he should just like to mention before he went, that he hoped the present adventurers in Devon Friendship would meet with such consideration as he had received at the hands of the lord. Mr. Buller's conduct had not only been pleasing to him, but he had acted in such a liberal manner that it had enabled him to feel towards Mr. Buller as he had not been able to feel towards landlords of other property. He had no doubt the proprietors of Devon Friendship would meet with similar treatment. (Applause.) He thought the Chairman deserved their hearty thanks for the active and able part he had taken, and if he had been able to remain he would have proposed a resolution to that effect.

Capt. Gill said when he became connected with Devon Friendship he felt convinced it was a good property, and he had seen no reason to alter that opinion. They had put up good machinery equal to the requirements of the mine, and he did not think the time was very distant when the mine would be in a position to pay dividends.

Mr. Lamb briefly referred to the satisfactory manner in which the wheel had been designed by Messrs. Loam and Son, and the Chairman added that the company might congratulate itself on the fact that although Mr. Loam had been an engineer for so many years, and had constructed so many wheels, yet this was one of which Mr. Loam was unusually proud, and which he especially recommended as one of superior power and quality.

Mr. Loam, sen., expressed his gratification at the confidence which the company had reposed in him, and the satisfactory manner in which they had alluded to his services. He spoke of the historical fame of Wheal Friendship, which the Messrs. Taylor and Son, who bore a name so eminent in mineralogy worked for 80 years. Having such great water-power at their disposal it had been their duty as engineers to dispose of it most effectually for the benefit of the mine, and the result was that a wheel had been produced which he ventured to say was not to be surpassed by any other wheel in the Kingdom. He considered that in the Bennett lode they had a lode equal to the great lode which returned those immense riches of the past. Now they had the dues reduced by one half, and the result would no doubt be a corresponding benefit to the adventurers at large. They hoped to drain the old mine and make the mundic in the stulls available for the adventurers. He believed the mine had a grand future before it, and hoped it would soon prove a dividend-paying concern. Mr. Loam then spoke of the Chairman as a gentlemen who bore an honoured name in connection with geology, and said that Mr. Murchison had been connected with mines in Devon and Cornwall for the past 30 or 40 years, and no one had shown himself to be a more sincere well-wisher of the district than had been Mr. Murchison. He trusted that gentleman might be long spared to continue his connection with Devon Friendship. (Hear, hear.)

The Chairman thanked Mr. Loam, and said he certainly hoped that he might long be connected with that concern, and that the mine would prove one with which as shareholders they would have good reason to desire to be connected, on account of the great profits they would receive from it. (Hear, hear.) The Chairman then alluded to Capt. Skewis, who he said was connected as managing agent with many important mines in the neighbourhood, including the Gunnislake (Clitters) Mine, which was already paying a dividend, and from what was going on at that mine he believed that Gunnislake (Clitters) would yield the shareholders still greater returns. He invited Capt. Skewis to address the meeting.

Capt. Skewis said Devon Friendship was not a new mine; it was not an unknown mine. It was a mine that had a name, as Mr. Loam had already told them. It was a mine which had established a name, and for very good reasons. One reason was that for a long series of years it was a friend both to the rich and the poor. (Applause.) That was a very strong reason why it should have a good name. (Hear, hear.) That mine, as they knew, was formerly a copper mine, and produced an immense quantity of copper for a great number of years, and was faithful and true; but at last it was considered to be old and feeble, and the physicians of that time thought its feebleness was constitutional, and that, as a matter of course, it must be kept on very light food. (Laughter.) However, it did not die quite so quickly as they had anticipated, and because it would not die the physicians said, "We will strip it of its garment, and plunge it headlong into a fountain of water;" but the mine said its feebleness was not constitutional—that the lungs were perfectly sound, but that they required a little nutritious food. Such was the character of that mine. It again said, and truthfully said, to the present proprietors, "Succour me, and I will be to you what I have been to others in the past." This was not a matter of opinion, but a matter of fact. The time was when practical men, able men, and wise men in their day and generation, when asked what they thought of this or that mine, replied that they had been important mines, mines which had produced large returns in copper, and given good dividends, but they added, according to the best of their judgment, that they thought those mines were "done." This remark was made with regard to Devon Friendship—that the bottom should be suspended, and that some portion of the mine should be abandoned entirely, and that was done. In his lifetime the Dolcoath Mine was started on the southern side of the same granite range which was first seen at Land's End, cropped up at Camborne, St. Austell, Caradon, passed by Tavistock, and was seen at Devon Friendship. Copper did not exist below a certain depth in the other mines on that granite range, and for that reason Tincroft was abandoned, and his father-in-law took it up as an abandoned mine and put it to work. Carn Brea was abandoned for the same reason, as was also the Phœnix Mine, which was one of the richest copper mines in East Cornwall, and in his youthful days these mines returned from 14,000*l.* to 18,000*l.* worth of copper a week; they did not sell that quantity of copper in a year now. All these mines, which were formerly the richest for copper, were now the richest for tin. There was no mine situated more favourably on the granite range than Devon Friendship, and no mine which had given better results for copper. He believed he was the only man whose memory had been so recently refreshed about the bottom of the mine. The Messrs. Taylor had 40 or 50 fms. pumped out for him to examine Taylor's lode, just before Mr. Lanyon purchased the property, some seven or eight years ago. He examined the whole of the mine, and was prepared to say there was no falling off in the size of the lode, which was as large at the bottom as it was to be found anywhere in the upper portion of the mine. It was approaching the granite, and the giving out of the copper was strong evidence of this, and from his observation of other mines in Cornwall, and as a practical man, he was prepared to say that whatever that mine had been in copper it would far surpass that quantity in produce of tin, and as capitalists they would be perfectly justified in expending what was requisite in machinery for the proper development of the mine. When that was done they would have an ample return for the capital so expended, and he had no hesitation in saying that for years Devon Friendship would maintain a reputation which was not likely to be equalled in the two counties. They would not have similar results for copper in Bennett's lode to that which had been experienced in the north lode, as they would have tin much sooner, but he felt sure that Devon Friendship Mine for 100 years to come would do honour to itself, and to every person connected with it if it was properly and economically worked. (Cheers.) At the very time when the sinking was given up it ought to have been pressed forward. They should be thankful their predecessors did not know everything, for if they did the present shareholders in Devon Friendship would not have had such a gem of a mine in their possession as they had at the present time. (Great applause.)

Mr. Loam, sen., said, as their engineers, his firm had done their best to design the wheel and other machinery for the development of the mine, but he thought it was due to those gentlemen who had executed the design and manufactured the wheel that he should express his sense of the satisfactory manner in which the Messrs. Pearce had carried out the work. The work had given entire satisfaction.

Mr. J. Pearce said it afforded himself and his brother (Mr. H. Pearce) great pleasure to find that their work had given such general satisfaction. Whenever such an order was entrusted to them, and especially in connection with such a firm as that of Messrs. Loam and Son, they always endeavoured to carry it out to the best of their ability, not merely for the sake of securing more work of that kind, but because having been associated with mining throughout their lives, and being at present connected with several mines, they felt a real interest in the mining prosperity of the district. He remembered Devon Friendship from the days of his boyhood, and, as he had said on a former occasion, used to watch with interest the wagons of rich ore which were conveyed through Tavistock to the quays. He hoped the time would come when they would almost require another line of rails to carry away their produce, and as there were so many railway schemes floating about just at present in connection with the Tavistock district they would not perhaps have to wait long for such extra accommodation. (Laughter and applause.) From what Captain Skewis had stated, there was no doubt that they possessed in Devon Friendship one of the grandest adventures that had been set to work for some time, and he trusted that that period was not far distant when the shareholders would be invited to take up dividends.

The Chairman called attention to the fact that there were some visitors present, and he wished particularly to mention the name of the Rev. W. Champernowne, the brother of the young lady who had performed the ceremony of christening the wheel.

The Rev. W. Champernowne thanked the Chairman for the kind manner in which he had mentioned his name, and said that mining enterprise conduced largely to the prosperity of the village of Marytavy. For example, at the end of the last century its population was 191, but, thanks to the revival of mining industry in connection with Devon Friendship some years since, it was 1400 or 1500. He expressed his satisfaction that the outdoor work on the floors was about to be abolished so far as girls were concerned, and that machinery was to be substituted. Although about to leave the neighbourhood he should always be glad to hear of the success of the mine, and he hoped that Devon Friendship would continue a flourishing concern when they were in their graves. (Applause.)

The Chairman having invited any shareholder to express the impression they had received from an inspection of the property,

Mr. F. Powell, of London, said he had the great advantage of being a considerable shareholder in this adventure, and was exceedingly pleased with what he had seen, and still more with what he had heard at the present meeting. He thought they owed a debt of gratitude to Mr. Murchison for having presented them with an opportunity of investing in that property. As a member of the London Stock Exchange and Market he knew the difficulty that was found in inducing persons to subscribe capital to work even the best of mining enterprises, and he thought that great credit was due to Mr. Murchison, who under circumstances of extreme difficulties had thrown such energy into this concern, that it now occupied the flourishing position described by various former speakers.

Mr. W. Criper agreed with much that had fallen from Capt. Skewis. Seven years ago he thought, too, that the mine was only in a low fever, and twelve persons, he being one, united, if possible, to become purchasers of the mine; but, unfortunately for them, their tender was a little below Mr. Lanyon's. There was certainly a vast amount of tin and arsenic available for this company, which the former proprietors regarded only as bye products. In his opinion, Devon Friendship would be a great mine. Mr. Criper proceeded to mention some statistics in order to show that the prosperity of the country mainly depended on its mineral productions, and dwelt on the fact that mineral could be raised at a less cost now than formerly by means of boring machinery and other scientific appliances.

Mr. A. E. Cooke, of London, said he was one of the first who recommended Devon Friendship shares to the public. He was considerably interested in the mine, and there was no concern he could recommend to the public for investment with greater confidence.

The Rev. S. Andrew said he had been astonished at the magnitude of the works, and at the immense amount of labour that had been performed by former proprietors. He could not conceive how so valuable a property had ever been even partially suspended, and he hoped, as he believed, there was a bright future in store for Devon Friendship.

Capt. Skewis drew attention to the great interest manifested in the undertaking by Capt. John Daw, at present in charge of the Bratsberg Mines in Norway; and the Chairman added some words to the same effect, observing that it was through Capt. Daw the property was introduced to him. Capt. Daw was of opinion that this mine was as good as the Bratsberg Mines, and that was saying a good deal, considering that for the first month's (November) working of Bratsberg the returns were expected to be upwards of 1700*l.* (Hear, hear.)

Mr. Criper said they were greatly indebted to their secretary, Mr. J. H. A. Smith. He had known Mr. Smith for some years. He felt certain he would perform his part to the satisfaction of all concerned. (Hear, hear.)

Mr. J. H. A. Smith returned thanks for the very kind manner in which Mr. Criper had alluded to his services. He would just mention one or two matters which had, perhaps, escaped previous speakers. It was more than 30 years since, on entering that district for mining operations, Mr. Murchison made a selection of Wheal Crebor, and it was unnecessary there to say how successful that mine had been. (Hear, hear.) After a long absence Mr. Murchison had chosen Devon Friendship for renewing his connection with the county, which he thought a good omen. In the Camborne district a Capt. Charles Thomas had inaugurated a new era of prosperity for the mines of West Cornwall. On this mine they had also the services of a Capt. Charles Thomas, and he trusted that the success which had been attained in West Cornwall would be found again in West Devon associated with the same name. Their esteemed friend, Capt. A. Waters, who unfortunately had to leave, had stated that even in mining history repeated itself, and he had no doubt the truth of that axiom would be again verified by the renewed success of Devon Friendship. (Applause.)

Mr. J. J. Daw also addressed the meeting, and spoke on behalf of the shareholders of the Tavistock district.——After a few further remarks the meeting terminated.

WEST KITTY MINE.

The four-monthly meeting of shareholders was held at the offices, Walbrook, on Tuesday,—Mr. John B. Reynolds in the chair.

Mr. F. J. Harvey (secretary) read the notice calling the meeting.

The Chairman: Perhaps the shareholders would like to take the balance-sheet which has been circulated as read. This was agreed to. There were no liabilities due and unpaid.

The Secretary said—Gentlemen, there is one statement I wish to make, and that is that there are about 8 tons of tin on the mine, which will realise about 500*l.*, of which we have taken no notice in the balance-sheet. (Hear, hear.)

The Chairman said—Gentlemen, we have again the pleasure of meeting, after the usual interval of four months, to consider our present position and future prospects. You will observe by comparing the last balance-sheet with the one now distributed that whereas we had in our banker's hands in July last 1534*l.* 8s. 2d. we have to-day a cash balance in our favour of 1309*l.* 0s. 1d., after defraying the exceptional expenditure of 770*l.* 6s. 2d., which we shall not have to incur again. (Cheers.) Those of you who are acquainted with mining operations will acknowledge the very limited extent of our stamping and dressing appliances up to the present time, and those who bear in mind the scarcity of water during the last six weeks will no doubt be astonished at the results before you. It now affords us extreme gratification to say that we have completed the erection of a water-wheel, 12 heads of stamps, burning-house and dressing appliances, and with a full supply of water, such as we are now favoured with, we shall be in a position to considerably increase our returns of tin per month, and at the same time work the mine fairly with a view to permanent profits. (Hear, hear.) You will be prepared for this intimation after having read the report of Capt. Josiah Thomas, which we circulated at the earliest opportunity. You will remember that in September last he valued the reserves in sight at 30,000*l.*, and those of you who know Captain Thomas also know that the reserves must exceed that amount. (Hear, hear.) All agents of standing refuse to indulge in language of exaggeration, and take care that their estimates are considerably within the mark. You have a very striking illustration of this fact in Capt. Vivian, your manager, whom we are glad to see with us to-day. (Hear, hear.) Capt. Vivian, by the way, seems to have the idea that "brevity is the soul of wit," also that "speech is silver, and silence is golden" appears to be burnt into his very soul. (Cheers.) But you, gentlemen, will be none the less grateful to him if he gives you what he never promised—a mine the like of which you have perhaps never had the good fortune to be interested in. (Cheers.) It is right, however, that you should, as proprietors, have as accurate an idea as to the value of your property as it is possible to impart, but if we judge your prospects by the light of recent results, we fear we might encourage you to a more sanguine view of the situation than would be justified. Nevertheless, it is fair to say that in all probability "that which has been" is "that which shall be," and according to every inspector who has been underground—they have been first-class men and numerous—there is no reason whatever to doubt that you have in West Kitty a property the value of which it is very difficult to estimate; for, gentlemen, you must remember, as a matter of fact, that the ore ground you have laid open has only taken about nine months to discover, and only extends over about 30 fms. in length and 25 fms. in depth. You must also remember that, at your boundary on the Wheal Kitty side, there must be a mass of tin ground in sight—(hear, hear)—which probably equals in value that which you have in and about the 60 and 72 fathoms level. Gentlemen, it is known that you have your riches at both ends, and when you come to consider the underlie of the lode, and the extent of virgin ground you have before you, I do not think you will get any manager in Cornwall to say that 60,000*l.* is a fair value for your splendid mine. (Cheers.) Already your prospects have infused new life into the district, and we ventured to say, at your last meeting but one, that this was likely to become one of the leading mines of the locality. Gentlemen, it has now taken the lead, and we shall offend the susceptibilities of no one by saying that, under "quiet and able management," it has been brought into the front rank of leading Cornish mines. (Cheers.) In all these statements we confine ourselves to matters of fact. We speak not of what will be accomplished, but only of that which is accomplished. We do not indulge in prophecy, but we have a very keen expectation that our future meetings, to which we look forward with great delight, will surpass even those many agreeable gatherings which we have enjoyed together, to talk over four months' transactions and their results. (Cheers.) Now, as to finance during the next four months. The profit of 1000*l.*, forming part of the credit balance at the company's bankers, will be paid towards the 3500*l.*, thus reducing that sum payable on purchase account, as per foot-notes on balance-sheet, to 2500*l.* and interest. We recommend you to appropriate the profit during the next four months, which will be considerable, to the purchase and erection of additional stamping power. After that, we shall very speedily pay off the 2500*l.* and interest, and then the mine will quickly go into the Dividend List. (Cheers.) Our object from the beginning has been, as we have before reminded you, to lay open a permanent dividend property, and we think you will agree with us in believing that we have, so far, been signally successful. I have much pleasure in moving the adoption of the balance-sheet. (Cheers.)

The Rev. Mr. Couzens said he had much pleasure in seconding the resolution.

The Chairman said the bankers' book and the cost sheets were on the table, open to the inspection of any shareholder.

Mr. Payne, as usual, was very sorry there was not going to be a call. (Laughter.) He wanted a call made at St. Agnes. If he had been allowed to have his way the financial position, good as it was, would have been still better. (Laughter.)

Capt. Vivian: I think there are not many people who would make a call to pay a dividend. (Hear, hear.)

The Chairman: If Mr. Payne will agree to collect the call I will agree to it, but as it cannot be legally made that matter is very quickly settled. (Hear, hear.) I am very sorry Mr. Payne cannot indulge in the luxury of a call—(a laugh)—but if he will come to the West Polbreen meeting to-morrow morning he will have that luxury, and I will second what he likes to propose. (Cheers and laughter.) I should like the shareholders to make any remarks they think proper. This is a cost-book company, and it is the duty of the shareholders to look after their own affairs.

A Shareholder asked whether the reserves were within the limits of the present workings, without taking into account the ore above the 60 fm. level?——The Chairman: I have said that the reserves are in ground already opened in and about the 60 and 72 fm. levels. The reserves do not include those which are on ground which we have not yet driven.

Mr. Budge said that such being the case it was impossible to say what the reserves amounted to; they might amount to 200,000*l.* or more. (Hear, hear.)

Mr. F. W. Michell: The reserves in the mine amount to what you can see.

The Shareholder: The point I wanted to draw attention to is that we have a large amount of ground not yet opened up. (Hear, hear.)——The Rev. Mr. Couzens said that many of the lodes in Wheal Kitty left off at the richest point.

Mr. Payne said he thought the extension to the boundary would prove the richest portion of the mine.

The Chairman (after a pause): If no shareholder has any other question to ask I will put it to the meeting that the balance sheet and vouchers now presented be received and passed.——The resolution was put and carried unanimously.

Mr. Harvey then read Capt. Vivian's report, as follows:—

Nov. 28.—I beg to hand you the following report of this mine:—In the 90 fm. level, driving east, the lode is about 2 ft. wide, producing a little tin, but not to value. In the 80, driving east, the lode is small and poor, much the same as it was in the 72, over this point. We have about 5 fathoms more to drive to get under the tin ground in the 72. In the 72, driving east, we have opened up about 30 fathoms of tin ground, worth from 12*l.* to 20*l.* per fathom; the lode in the present end is worth 18*l.* per fathom. In the 60 fm. level, driving east, we have driven through about 25 fathoms of tin ground, worth from 15*l.* to 70*l.* per fathom; the lode in the present end is worth 30*l.* per fathom. In the 50, driving west of the rise, we have driven about 12 fathoms; the lode is worth from 10*l.* to 30*l.* per fathom, and the lode in the present end worth 10*l.* per fathom. In the 72, driving west of shaft, the lode is 3 ft. wide, producing good stones of tin, but not to value. In the rise in the back of the 72 west the lode has very much improved for the last 3 fathoms, worth about 8*l.* per fathom. The cross-cut driving south of engine-shaft is now driven 22 fathoms; I hope to interseot the lode in about 6 fathoms more. This will ventilate the whole of the mine, and open about 30 fathoms in depth on the course of the lode, worth from 15*l.* to 50*l.* per fathom. Our new stamps and dressing-floors are now in good working order. We have stamped about 80 tons of low quality tinstuff to commence with; we shall now stamp a better class work, and our returns of tin will be considerably increased. Seeing that we have a large quantity of good tin ground opened up for stoping I now purpose to purchase a 30-inch cylinder engine and 16 heads of stamps more, and this work to be commenced with at once. Looking at the extent of ore ground laid open, and our general surroundings, it will be clear to you that we have one of the best mines in Cornwall.—Wm. Vivian.

The Chairman: If the shareholders will take the trouble to read the statements which are published weekly in the *Mining Journal* they will see exactly how we progress. The lode in the cross-cut at the 60 will be cut in about two or three months, and the shareholders will see that we shall open up a still further amount of tin ground, and ventilate the mine thoroughly for some time to come. (Hear, hear.)——A Shareholder: I was going to ask you a question upon that very point; I presume that is a very important matter.——The Chairman: Yes, it is a very important matter indeed. It is a point of very considerable interest.

Capt. Vivian: When we get the cross-cut in and cut the lode it will enable us to go on with two or three more important points, which will increase the returns.——A Shareholder: How many men are there at present at work on the mine?——Mr. Michell: 81 persons besides the agents, and exclusive also of carriers and so on.——Capt. Vivian added that about 40 of these were employed underground, and 40 on surface operations.

The Chairman: I dare say it would be interesting to the shareholders to know where the tin comes from which appears in the balance-sheet?——Capt. Vivian: It comes from driving levels.

Mr. Dutton said he noticed that in the last pay-sheet there was an amount (for the first time) of 6*l.* 10s. for stoping in the 60. He asked whether it was the commencement of stoping?——Capt. Vivian: Yes, and I will tell you how it occurred. We have now 150 tons of stuff at surface, but our stamping powers have been limited, and we have 8 tons of tin on the mine, so that really there is no tin sold from the stope; but to keep up our returns, instead of stamping 150 tons of stuff to get that 8 tons of tin, we got the 8 tons of tin out of about 20 tons of stuff. (Cheers.) We are not stoping just now, but we shall commence again next week.

Mr. Michell: The shareholders should know that this is a marvellous result—8 tons of tin out of 20 tons of stuff. (Hear, hear.)——Mr. Dutton: I saw some at the mine quite two-thirds tin.

Mr. Payne: Did I understand you, Capt. Vivian, that you made 8 tons of tin out of 20 tons of stuff?——Capt. Vivian: Yes, and we could make 60 tons more next week. (Cheers.)——Mr. Payne: That is a statement which would surprise many shareholders who do not know the mine.

Mr. Michell: You see how easy it is to raise money now you are doing well. (Hear, hear.)——Mr. Payne: I do not like to be in debt. (Hear, hear, and laughter.)——Capt. Vivian: We are talking of paying 1000*l.* off the debt to-day. (Hear, hear.)——Mr. Payne: And I was very pleased to hear that. We must all be gratified to find that we are paying off the debt.

Mr. Dutton said he had to move:—"That Capt. Vivian be and is hereby instructed to proceed as quickly as possible with the completion of the stamping machinery by the erection of an engine and 16 heads of stamps." From what Capt. Vivian had said, the mine was holding eastward and westward, and a large quantity of tin existed which required to be brought to the stamps; they had not sufficient stamps, and it would be necessary before the dry season came on next summer that they should be entirely independent of water-supply which had been very scarce all the summer and last month. If they now commenced the erection of a steam-engine and stamps they would be in full swing by the time the water failed next summer. It was a necessary expenditure of money, and he believed the shareholders would be surprised at the returns when they had more steam-power and more stamps. (Cheers.)——Mr. Michell seconded the motion.

The Chairman: The resolution will at once commend itself to you. We must complete our stamping appliances, and then you will be able to return tin at the best possible rate. You quite understand that we intend to take this money out of the profits during the next four months. I have given consent to that, because on account of the great forethought of Mr. Learoyd, our solicitor, in the agreement of purchase, which is at the foundation of this company, we are permitted to complete the steam appliances before paying off the 3500*l.* (Cheers.)

The resolution was put and carried unanimously.

The Chairman: I may take the opportunity of telling Mr. Learoyd (who was not in the room at the commencement of the proceedings) that the mine is in such a good position that the committee are going to hand over to me 1000*l.* out of the profits, on account of the purchase-money. This is very satisfactory, and

when these stamps are completed, which will be very soon, we shall almost immediately pay all the balance of the purchase-money, and then, as I said in my opening remarks, the mine will soon go into the dividend-paying list. We are all very much obliged to Mr. Learoyd for guiding us so successfully in the matter. (Hear, hear.)

Mr. EARLY: How long will it be before the further stamps to be erected are in operation?——Capt. VIVIAN: We do not want the new steam-stamps till the water fails us in Autumn, and they will be quite ready before that time. Our present stamps are ample for our requirements until the fall of the year.

Mr. PAYNE: What will be the expense of the new engine and stamps?——Capt. VIVIAN: Something like 1500*l.* by the time they are completed.

On the motion of Mr. MICHELL, seconded by Mr. EARLY, a formal resolution was then passed to the effect that the Lambourne lease then on the table be accepted on behalf of the company by the Rev. J. J. Couzens and Messrs. Thomas Bowman and John B. Reynolds.

The CHAIRMAN explained that the piece of land referred to was the place where the stamps were erected, and was a splendid position.

Mr. LENNOX: Gentlemen, I beg to move "That the thanks of the meeting be and are hereby presented to the committee for their past services, and that they be re-elected, with the addition of the Rev. J. J. Couzens." I have great pleasure in proposing that resolution. The members of the committee have a very important stake in the concern, it is well they should also have the help of our friend the Rev. J. J. Couzens, who also has a very large stake in the concern. (Hear, hear.) The committee appear to be able and willing to serve. I have myself been a witness this morning, through courtesy, of their willingness as well as their ability to watch over every interest connected with the company. They render also gratuitous service. (Cheers.) We have not to fee them, as is the case with Limited Liability concerns, and although we might be able to do so out of our profits. I think it is much better that they should render gratuitous service as having an interest in the concern, and deriving advantage from it. (Hear, hear.) As the committee have so ably managed the affairs of the company when it was a struggling company, I think they should have the management of the affairs now it has become a prosperous company. Not many worship at the shrine of non-success; in this utilitarian age people worship at the shrine of prosperity—(hear, hear)—and, therefore, as one greatly interested in the matter I have great pleasure in moving this resolution. (Cheers.)

Mr. H. JENKINS seconded the motion.

Mr. BUDD (one of the committee) expressed his full approval of the election of the Rev. Mr. Couzens on the committee, but he said he thought that rather scant courtesy was shown to one or two members of the committee at the last general meeting in Cornwall, when Capt. Vivian and Mr. Harvey were elected on the committee without himself (Mr. Budd) and another member of the committee having been previously informed as to the intention of the shareholders. It must be understood that he had no personal objection to the gentlemen elected.——Mr. DUTTON (another member of the committee) said it was necessary that those gentlemen should be elected on the committee, which was done by the shareholders themselves in open meeting as was their right.

The CHAIRMAN confirmed Mr. Dutton's view, and said that notwithstanding no member of the committee knew the intention of the shareholders, yet most unquestionably the shareholders acted strictly within their province. (Hear, hear.)——The resolution was then put and carried unanimously.

The Rev. Mr. COUZENS: The resolution which I have to propose is the last but not the least. I have great pleasure in rising to propose that the salary of Capt. Vivian be raised from eight guineas to twelve guineas per month. (Cheers.) I think that is only an act of justice, and in proposing the resolution I do it most heartily. As I have expressed at meetings before, so I express again, my fullest and most unbounded confidence in Capt. Vivian. I have been to the mine several times; I have stayed in the neighbourhood for long periods—six weeks at a time—and I have seen Capt. Vivian go about his duty there; day after day he is engaged in the affairs of the mine from early morning till late at night, and if all the property belonged to him he could not more thoroughly do his duty, and seek better to discharge the duty which devolves upon him as manager of the mine. (Cheers.) I felt at the last meeting that we should have taken this step, and it was talked over; but as we were making only a small profit it was thought better to defer it to this meeting, and that was also the wish of Capt. Vivian himself. But now, as we are in a better position, we should pay Capt. Vivian a little more, and he is entitled to a great deal more. (Cheers.)

Mr. BUDD said he had pleasure in seconding the resolution. He always looked very closely to the expenses, but at the same time he always considered they should give a fair day's wage for a fair day's work, and he believed that what they now proposed to pay Capt. Vivian was only a moderate amount of salary. (Hear, hear.) From a ten years' connection with the mine he was convinced that Capt. Vivian was an honest-hearted man, deeply interested in the welfare of the mine. (Hear, hear.)

The resolution was put and carried unanimously.

The CHAIRMAN: Capt. Vivian, I have great pleasure in conveying to you the good wishes of the shareholders, and this substantial proof of their appreciation of your services. I heartily endorse it, and hope you will long live to enjoy it. (Cheers.)——Capt. VIVIAN: I am very much obliged to you for the liberal way in which you have dealt with me. I have endeavoured to the best of my ability to bring the mine to what it is, assisted by the able committee we have here, and whilst I am in your service I shall always endeavour to do so. (Cheers.)

The CHAIRMAN: Gentlemen, the committee are very much obliged to you for your attendance here to-day. I hope you have been pleased at what you have heard; and the time will soon come when I have no doubt you will be more substantially enriched than at the present moment. (Cheers.)

Rev. Mr. COUZENS proposed a cordial vote of thanks to the Chairman for his courteous conduct in the chair, and for the able way in which he had supplemented the information contained in the accounts and in Capt. Vivian's report.

Mr. PAYNE seconded the motion, and said it had afforded him great pleasure and satisfaction to be present at the meeting, and listen to what had been stated, and the information which had been afforded.——The resolution was carried.

The CHAIRMAN: I am very much obliged to you, gentlemen. I will do my best in your interests, and I will study your interests alone. (Cheers.)

The proceedings then terminated.

WEST POLBREEN MINE.

The four-monthly meeting of shareholders was held at the offices, Walbrook, on Wednesday,

On the motion of the Rev. J. J. COUZENS, seconded by Mr. PAYNE, Mr. John B. Reynolds took the chair.

Mr. F. J. HARVEY (the secretary) read the notice calling the meeting, the balance-sheet, and also the certificate of the auditor vouching for the correctness of the accounts.

The CHAIRMAN: There are no liabilities due and unpaid. You owe nothing?——Mr. HARVEY: Nothing whatever.

The CHAIRMAN, who was received with cheers, said: Gentlemen, an impression prevails that I am the chairman of this company. Will you allow me the present and first opportunity of correcting this idea? It is only in accordance with your wish, as just expressed by the shareholders who have moved and seconded the proposition that I should preside to-day that I shall guide your deliberations on this occasion. But, gentlemen, I am always glad to render whatever service I can to a mining company such as this. It appears to me that your commencement was the guarantee of prosperity—as far as it was possible to ensure success—by adhering to the "no credit" system, and by anticipating your expenditure by providing for it beforehand. As you proceed in the development of your property the advantage of this system will be more and more apparent to you. The public will get to know that your indebtedness is met from time to time immediately items become due, and that it cannot be said at any time that you have liabilities due and unpaid. If there is one thing more than another upon which I want to lay emphasis to-day it is that under no circumstances should there be a departure from the "no credit" principle. (Cheers.) If anyone connected with the company should depart from it the mistake will be quickly detected and as quickly made known; but I do not think there is a disposition on the part of anybody so connected with you to take credit. On the contrary, I am convinced that it will be easy for you to do business within the lines you have marked out for yourselves; but to remove the slightest uncertainty which might exist it will, I understand, be proposed to-day that the fact of your conducting your business upon the "no credit" system shall have all possible publicity by its being recorded on every official document issued by the managers. (Cheers.) As far as your financial position is concerned you see, of course, that there are no liabilities due and unpaid; that there are no arrears of call, and that the bankers' book, now on the table, shows that you have a balance in your bankers' hands of 41*l.* 8*s.* 11*d.* You were informed at the last meeting of shareholders, held at St. Agnes, that you obtained this property direct from the lords. Up to the present time you have been working under a preliminary license granted by His Royal Highness the Prince of Wales. To-day that license will be replaced by a lease of 20 years from H.R.H. the Duke of Cornwall, which lease is now before you ready for signature. (Hear, hear.) A resolution will be submitted to you authorising certain gentlemen, who are shareholders, to accept this lease on behalf of the company. It is subject to the usual conditions, with the exception that there is no minimum rent, and the dues are 1-18th, reducible to 1-20th. It will be necessary to provide for the next four months' expenditure by an insignificant call, and a resolution on this subject also will be moved presently. Now, gentlemen, allow me to continue this very matter-of-fact address by assuring you that I am impressed very deeply with the value and importance of the St. Agnes district. It is quite evident to me that there are many who are waking up to the fact that the locality has not yet been half developed, and when we recollect that West Polbreen is in the very heart of this district, and on the celebrated western hill, I do not wonder that the mine is popular, and held in high repute. Indeed, gentlemen, I should be surprised if it were otherwise, seeing the extent of your limits, the rich courses of tin which you are likely to meet with in the future, and the admirable system upon which your business is conducted. It appears to me that this system, commonly known as the Cost-book System, guarantees, if properly worked, economical management, the strictest limitation of capital, equal division of profits, not to be swamped by preferential debentures or other securities, and absolute fair play all round. (Cheers.) After all there is something very attractive in the motto "share and share alike." Burdens should be equally borne, and benefits equally distributed, and you have the very striking fact of the practical success of this method. For, notwithstanding that you, as a company, are in your infancy, your shares stand, and can be easily sold, at a premium of 1000 per cent. (Cheers.) Why is this? Simply because the demand for your shares has far exceeded the supply. This must be so, for you are not a packed company. Your shares are distributed all over the country, and the constituency is one of the most respectable, influential, and intelligent for a mining company that I have ever known. Your shares, however, at the premium I have named only amount to 6000*l.* for the mine. I would ask what you think of such a price for a property with such exceptional prospects? I have nothing to say on this occasion about the old Cost-book System, for that is extinct, but I do submit, concerning the Act of 1869 for the better regulation of mines within the Stannaries of Devon and Cornwall, that it was framed with a view to the strict protection of the individual interest of every shareholder, and that in its working its purpose is most satisfactorily answered. (Hear, hear.) It has been described, and most correctly I believe, as you work it, as being the essence of Limited Liability, and that the public are undoubtedly of the same mind, in the face of all that has been said and written to the contrary, is shown by the unlimited confidence they have in the management of this and other first-class Cost-book mines. It is well, gentlemen, to deliberate and spend a reasonable amount of time in the consideration of the foundation upon which you build, and therefore I need not apologise to you for being rather lengthy when endeavouring to impress upon you the absolute security of that foundation. The company is yet in its infancy, the mine has yet to be developed, and although your success may be sudden, and your profitable business may come long before you may look for it, yet you must lay your plans as if you were conscious that you would have years of labour before you to bring to light what you believe to be within the boundaries of West Polbreen. And now, gentlemen, I am reminded by this observation that you will all want to know how long it will be before you reach the Wheal Kitty lode at the adit level, and I am very glad that Capt. Vivian is here to-day to explain to you the distance which he thinks you will have to drive to cut it, and he will tell you that the Wheal Kitty lode has never been known to fail. I do not mean to say that there are not many poor places in it. I only speak of the average result of working upon it, and it has transpired that you have an extent of ground upon it as long perhaps as any other mine in the district. It is not for me to value your property, nor for anybody else to do so, for as far as we know to the contrary it may be as honestly worth 50,000*l.* at this moment as any other mine in the parish. I am rejoiced, gentlemen, that the public are becoming alive to the fact that if they speculate they must have all the chances in their favour, and that the present shareholders in this mine have all the chances on their side I have not the smallest shadow of a doubt. (Loud cheers.) In conclusion, the Chairman moved the reception and adoption of the balance-sheet.

Mr. EARLY seconded the motion, which was put, and carried without any discussion.

Mr. HARVEY then read the agent's report, which was as follows:—

Nov. 28.—My report is very short to-day. Since the meeting held on July 26 last we have confined our operations to the driving of the adit level north of Wheal May shaft to intersect Wheal Kitty great flat lode of the district, which is now turning out so rich in West Kitty. We have driven the cross-cut about 17 fms. Our progress has been rather slow for the last six weeks, as we have been driving through a large elvan course. We are now getting into a better channel of ground. I hope to cut the lode in about 6 or 8 fms. further driving. When we intersect the lode we shall have fully 20 fms. of backs up to the former workings. Provided this piece of ground turns out as rich as the lode has at Wheal Kitty and West Kitty mines it will very much assist to pay the cost to put up an engine and sink a shaft on its course. Seeing the position of this mine and its relation to the rich Wheal Kitty lode, the extent of sett and many other points of importance, no doubt the shareholders may reasonably look forward to a large return on their moderate outlay.—W. VIVIAN.

The CHAIRMAN: Now, gentlemen, Capt. Vivian is here, and if any shareholder would like to ask him any questions on these accounts or on mining in the district he will be glad to answer them. You must recollect that whatever is interesting to the West Kitty or the New Kitty shareholders is interesting also to you.

Mr. EARLY said he had only one question to ask. According to Capt. Vivian's report they had a certain number of fathoms to drive to cut the Wheal Kitty flat lode; he would ask how long it would take to do that?

Capt. VIVIAN said they were now driving about 3 fms. per month. They had driven for the shaft up to where the lode was seen at surface. This lode cropped out at surface, and had been worked on by former workers, and there were accounts to show that the lode proved productive 8 or 10 fms. from surface. It had been opened up all the length of the sett on the back of the lode, and they could detect the underlie of the lode so far. The 8 or 10 fms. where they cut the lode would be 20 fms. below where they had seen it before. It depended upon the underlie how far they had to drive. A slight turn in the underlie would give some fathoms more or less driving; but, as he had stated, he thought it would be 6 to 8 fms. before they cut the lode. It had been stated that there had been large returns close to the surface. As a practical man he saw no reason to doubt that they might have as good a mine in West Polbreen as in West Kitty. (Hear, hear.) Of course, mining was a speculation, and no certainty, and they must not take this as a certainty.

The Rev. J. J. COUZENS said that, as Capt. Vivian had told them, there were those lodes running through the setts. There were little shafts 8 to 12 fms. deep sunk by the old workers quite across the West Polbreen property. They were not driven deeper because when the old workers came to water they could not go any deeper, and that was the reason they sunk so many shafts, because when one shaft was filled with water they left it and sunk further on. He had been over the sett several times with Capt. Vivian. He called on a farmer who lived on one part of the sett, and the farmer informed him that in sinking a cistern at the back of his house he had come upon a lode, and at the back of the house he (Mr. Couzens) saw some heavy tin stones—of which he brought two pieces away—that bore a striking resemblance to the tinstuff in West Kitty and New Kitty. (Hear, hear.) There were tin crystals of good size, and tin interspersed throughout the stone; that was a few feet from surface.

Capt. VIVIAN said the farmer had a large lode of the stuff which he took from the cistern, and also some tin stones which he turned up with his plough.

Mr. DUTTON asked what sort of ground they were driving through?——Capt. VIVIAN said that at present they were driving through the elvan course, but they expected soon to get to the killas. They had been throwing up some killas, and it struck him it must be the same lode as in West Kitty and New Kitty. In Cornwall they looked for great deposits of ore near and about the elvan course. Many of the best mines in Cornwall had made near large elvan courses; therefore this was a very favourable indication indeed.

The Rev. J. J. COUZENS said the ground had changed its character since they had been driving.——Capt. VIVIAN said it had; it had lost its irony appearance, and they were getting into more favourable ground. When they got to the lode there would be no difficulty in working upon it. They would open east and west. When they got the lode they would commence sinking an engine-shaft upon the course of the lode, but until that was done they would drive east and west, and then stope the backs. They had other points of interest in the eastern part of the mine, adjoining New Kitty, which they must turn their attention to shortly, but he should like first to cut this lode. (Hear, hear.)

The CHAIRMAN: There is a gentleman in this room who has made this district his study, and has spent some months in Cornwall in going through the mines and making enquiries here and there. He is a good friend to mining, and deserves all the success which he happily has achieved, and no success can be too great for him. I refer to the Rev. Mr. Couzens, and I am sure you would like to hear a few words from him. (Hear, hear.)

The Rev. J. J. COUZENS said that at former meetings he had stated his high opinion of the district, and he really had not much new to add. His faith in the district was quite as strong as ever, and he thought stronger than ever. He had spared no time, trouble, or expense to get information in connection with St. Agnes district, and especially with reference to the flat lodes which traversed the district, and which were worked upon at Wheal Kitty and yielded large profits. He made a discovery, at least he had his opinion confirmed, in reference to the first flat lode recently touched, upon which they were working in New Kitty. He found, after searching the numbers of the *Mining Journal* for some years past, and hearing what others said, that it was upon the first flat lode that they made their great profits at Wheal Kitty some 30 or 40 years ago, under the management of Capt. Lyall. He had an interesting extract from the *Mining Journal* of April 21, 1861, of a report of a meeting of Wheal Kitty, which had very much encouraged him in connection with his holding in West Polbreen, New Kitty, and West Kitty, and large as was his holding in these mines he regretted that he had not a still larger holding. What strengthened his belief in those three mines was that this first flat lode ran through those three setts. (Mr. Couzens here read the extract from the *Mining Journal* to which he had referred. In it Mr. Davey, M.P., was reported to have said that the 65 cross-cut in Wheal Kitty was an important point, the ground in that working having been very productive the whole of the distance, and in some parts very valuable. The discovery in the 24 in former years yielded large profits, but the shareholders would not pay calls, and an application was made to the Warden of the Stannaries, but shortly after this Capt. Lyall touched upon a kindly lode which yielded profits.) Mr. Couzens having read the extract went on to say that that lode in Wheal Kitty yielded large profits—he had heard between 40,000*l.* and 50,000*l.* Those profits were made on the first flat lode in Wheal Kitty. On the western side of the hill a second flat lode had been found, which had proved even more productive than in Wheal Kitty, and the reasonable inference was that that lode would also prove profitable in New Kitty and West Polbreen. (Cheers.) He had been over the setts many times; he had seen, as he had said, the pits or small shafts running to the end of West Polbreen, and the old workers would not have taken the trouble to sink and secure the pits if it had not paid them to do it. (Hear, hear.) It was fair to infer that the old workers found the lode productive, and worked it in that way at a profit, but they could not go on further on account of the water. There was no doubt that in West Polbreen the prospects were excellent, and time only was required to thoroughly work and develope the property. (Hear, hear.) He had unbounded confidence in all three mines—West Kitty, New Kitty, and West Polbreen. It was simply a matter of time. After Capt. Richard Pryor discovered the second flat lode it made 65,000*l.* profits. They had the lode richer in West Kitty than ever they had it at Wheal Kitty. When he was at St. Agnes one of the miners who had worked 13 years in Wheal Kitty told him that at the 60 in West Kitty they had a splendid looking lode, adding that he had seen good things in Wheal Kitty, but nothing to equal the lode in the 60 east in West Kitty. (Cheers.)

The CHAIRMAN: I am sure we are exceedingly obliged to Mr. Couzens for the information he has given. (Cheers.)

The Rev. Mr. COUZENS said he might add that the ore was splendid. He had been in the district of Carn Brea, Dolcoath, and Wheal Agar, but he saw no tin stones there equal to those on the West Polbreen property.

Mr. SUMNER said that, contrary to the advice of Mr. Reynolds, he some time since sold West Kitty shares at 2¼, and now he was buying some back at 9 per share.

The CHAIRMAN: The next question is that of a call. All the shareholders' money is paid direct to the company's bankers, who are the only persons authorised to receive it on behalf of the shareholders. You have the control of the finances entirely in your own hands. You are your own committee of management, and vote or stop supplies as you like. You are supposed to audit your own accounts every four months, but you have a finance or audit committee who meet every month and check the accounts in your interest, and see that proper charges only are made. Everything is charged up closely to the latest date. You are always kept out of debt, and, therefore, out of danger. (Cheers.) We wish to have money to go on with for the next four months, and I think 1s. per share will be ample. Mr. Payne wants more, but we must not let him. (A laugh.) It is no use letting the money lie idle. These calls will probably be continued for a time from meeting to meeting, according to the work desirable to be done. You can limit your own expenditure. (Hear, hear.) If anyone is tired he can sell his shares and get out. I will buy them of you. The Cost-book System under the Act of 1869 is the most complete system of Limited Liability. (Hear, hear.)

Mr. PAYNE said that, so far from selling his shares in West Kitty, as Mr. Sumner had, he had been gradually increasing his holding till very recently, and now had a very considerable holding in that and the other two companies. He had done this on the advice of a trusted agent and friend in the district, in whose opinion he had the highest confidence, and who had never misled him. He was sure they must all have been pleased with the practical remarks of Mr. Couzens. For his own part, he considered the prospects in West Polbreen were grand. But they must have money to go on with, and thoroughly develope and work the mine; and therefore he had pleasure in moving that, to provide for the working of the mine for the next four months, a call of 1s. per share be made, payable to the company's bankers, Messrs. Williams, Williams, and Grylls, on or before Dec. 16 next.——The Rev. Mr. COUZENS seconded the motion, which was put and carried.

Mr. DUTTON moved that the thanks of the meeting be presented to the finance and audit committee for their past services, and that they be re-elected. He said he fully endorsed all that Mr. Couzens had said as to the value of the property and its excellent prospects. He had been in the district and had seen the riches there, and was fully satisfied that the rich lode which had been referred to ran through the three setts. He should be surprised and disappointed if they did not find an enormous mass of mineral underground. (Hear, hear.)——Mr. LENNOX seconded the motion, which was put and carried.

Mr. LENNOX moved "That the deeds under which the company were now working having expired the renewal of the said deeds for 20 years by His Royal Highness the Prince of Wales and the lords of Ty Tyas, now on the table, be accepted on behalf of the company by the Rev. J. J. Couzens, Mr. Dutton, and Mr. J. B. Reynolds." He was sure all the shareholders had the fullest confidence in those three gentlemen. (Hear, hear.) He was very pleased to see the lease had been acquired at this early stage in the company's history. It was very important that a matter of such an important business character as this should be settled at the outset, before the mine had been developed, for then no troublesome claims could crop up, as had been the case in some other companies. (Hear.)

Mr. CHILD seconded the motion, which was put and carried.

The CHAIRMAN: I should like Capt. Vivian to tell you that we have quite as much mineral rights as we want, and that we require no addition to our property.——Captain VIVIAN: No; I think we have everything which will be required. We have a very extensive sett and several lodes running through it. The title is perfectly clear. I think all we want is in this deed. We have but one lease for the whole, which will relieve us of a great burden which many have to contend with in other districts.

The CHAIRMAN: We have taken care to get the title from the lords. The next resolution will be with respect to this—"No credit" system, which I hope all the shareholders will see is rigidly carried out. "Out of debt out of danger." By keeping out of debt in West Kitty we are saving about 70*l.* or 80*l.* a year in discount to merchants alone, and we have the additional advantage of getting supplies in the cheapest market. Every one is anxious to deal with us because we pay cash.

The Rev. Mr. COUZENS moved that it be an instruction to the secretary to have printed after the name of the company in every document the words—"Conducted on the no credit system," and that the secretary be requested to give publicity to the fact that there is no credit. He felt as strongly as the Chairman on this point, and he certainly should not hold the large interest he did unless the mine was conducted on the no credit system. He had every confidence in the London office, and in the mine, and in the manager, and also the highest confidence in the financial management. He believed they were a pattern to most mines, and that it would be a good thing if many other mines carried out the same system which was in operation in carrying out the financing of this mine. When he was in Cornwall he went about to see all he could. He went with Capt. Vivian to Truro when he sold the tin, and saw the smelters, the bankers, and the merchants, and was impressed with the courtesy shown by all to Capt Vivian, and also to the mine. Those gentlemen spoke well of the management of West Polbreen, and also of West Kitty and New Kitty, and the merchants were ready to send anything that was wanted on the mines, knowing they would be paid at once. (Hear, hear.) Now-a-days one reads a great deal about Limited Liability companies, in connection with which many had made fatal shipwreck, and he believed that as time went on shipwrecks would increase in number, and many people would see that they had made a grand mistake in going in for companies conducted on the Limited Liability Principle. He would not touch it himself in connection with home mining. People wanted educating and keeping up to the mark in mining as well as in other things with respect to this "no credit" system. (Hear, hear.)——Mr. BROAD seconded the motion, which was carried unanimously.

The CHAIRMAN: Well, gentlemen, we have had a bright and happy meeting. I hope it is one of many in store for us. (Cheers.) I am very much obliged to you for your attendance here to-day.

On the motion of Mr. LENNOX, seconded by Mr. BROAD, a very cordial vote of thanks was passed to Mr. Reynolds.

The CHAIRMAN: Gentlemen, I beg to thank you. I have enjoyed the meeting very much. Fair play, and no concealment. Everything above board as far as I know, and I hope success awaits you. (Cheers.)

The meeting then broke up.

PROVINCIAL STOCK AND SHARE MARKETS.

CORNISH MINE SHARE MARKET.—Mr. S. J. DAVEY, mine sharedealer, Redruth (Dec. 1), writes:—Our market has been much quieter than usual during the week, and business has been very slow. Prices have been without important fluctuations. Settling checked business yesterday and to-day. At Peevor meeting on Tuesday a 5*s.* dividend was declared. A dividend of the same amount was declared at Tincroft to-day. Prices are as follows:—Blue Hills, 2½ to 2¾; Carn Brea, 25½ to 26; Cook's Kitchen, 26 to 27; Dolcoath, 90 to 91; East Pool, 43½ to 44; East Blue Hills, ½ to ⅝; Killifreth, 30*s.* to 32*s.* 6*d.*; Mellanear, 4½ to 5; New Cook's Kitchen, 5 to 5¼; New Kitty, 1¾ to 2; North Penstruthal, ½ to ¾; Phœnix, 3½ to 3¾; Pedn-an-drea, 3⅜ to 3⅝; South Condurrow, 11½ to 11¾; South Penstruthal, ¼ to ½; South Crofty, 9¼ to 10; South Tolcarne, 1¾ to 2; South Frances, 16⅝ to 16¾; Tincroft, 18½ to 19; West Basset, 14½ to 15; West Frances, 18¼ to 18½; West Kitty, 8⅞ to 9⅛; West Peevor, 14 to 14½; West Poldice, 6 to 6⅛; West Tolgus, 27½ to 30; West Seton, 14 to 16; West Polbreen, 1 to 1¼; Wheal Agar, 14¼ to 15¼; Wheal Basset, 5¼ to 5½; Wheal Comford, 2½ to 2¾; Wheal Grenville, 11¾ to 12; Wheal Jane, 25*s.* to 27*s.* 6*d.*; Wheal Peevor, 12¼ to 13; Wheal Jewell, ⅛ to ¼; Wheal Uny, 3⅞ to 4⅛.

— Mr. J. H. REYNOLDS, stock and share broker, Redruth (Dec. 1), writes:—Business has been rather restricted during the week, and prices generally have somewhat given way. The fortnightly settlement being in hand there is not very much doing for the new account. Subjoined are the closing quotations:—Blue Hills, 2 to 2¼; Carn Brea, 25¾ to 26¼; Camborne Vean, 10*s.* to 12*s.* 6*d.*; Cook's Kitchen, 26 to 27; Dolcoath, 90½ to 91; East Pool, 43¼ to 44; East Blue Hills, 10*s.* to 12*s.* 6*d.*; Killifreth, 1½ to 1⅝; Marke Valley, 1¾ to 1⅞; Mellanear, 4½ to 5; New Cook's Kitchen, 5 to 5¼; New Kitty, 1⅞ to 2; North Busy, ⅝ to ¾; North Herodsfoot, 10*s.* to 12*s.* 6*d.*; North Penstruthal, ⅝ to ⅞; Pedn-an-drea, 3½ to 3¾; Phœnix, 3½ to 3¾; Penhalls, 1¾ to 1⅞; South Condurrow, 11¼ to 11¾; South Crofty, 9¾ to 10; South Frances, 16¾ to 17; South Tolcarne, 2 to 2¼; Tincroft, 19¼ to 19½; West Basset, 14¼ to 14¾; West Frances, 18½ to 19; West Kitty, 8¾ to 9¼; West Peevor, 14¼ to 14½; West Polbreen, 1⅛ to 1⅜; West Poldice, 6¼ to 6½; West Seton, 16 to 18; West Tolgus, 25 to 30; Wheal Agar, 14¾ to 15¼; Wheal Basset, 5¼ to 5½; Wheal Boys, 2¼ to 2½; Wheal Grenville, 12 to 12⅛; Wheal Hony and Trelawny, 2¼ to 2½; Wheal Jewell, 5⅛ to ¾; Wheal Kitty, ⅝ to ⅞; Wheal Peevor, 12½ to 13; Wheal Prussia, 1¼ to 1½; Wheal Uny, 4 to 4⅛; Wheal Jane, 1⅜ to 1½.

— Messrs. ABBOTT and WICKETT, stock and share brokers, Redruth (Dec. 1) write:—Prices have not varied to any extent during the past week, but on the whole the tendency has been downwards. There is less inclination to do business than of late. Quotations annexed:—Blue Hills, 2½ to 3; Carn Brea, 25½ to 26; Cook's Kitchen, 26 to 26½; Dolcoath, 90 to 91; East Pool, 43¾ to 44; Killifreth, 1½ to 1⅝; New Cook's Kitchen, 5 to 5⅛; North Busy, ¾ to 1; Pedn-an-drea, 3½ to 3¾; Santa Gertrude, 170 to 175; South Caradon, 45 to 50; South Condurrow, 11½ to 12; South Crofty, 9¾ to 10¼; South Frances, 16½ to 17; Tincroft, 19 to 19½; West Basset, 14¼ to 14¾; West Kitty, 8¾ to 9; West Poldice, 6¾ to 6½; West Peevor, 13¾ to 14¼; West Frances, 18½ to 19; West Seton, 15 to 16; Wheal Agar, 14½ to 15; Wheal Basset, 5 to 5½; Wheal Boys, 2 to 2½; Wheal Grenville, 12 to 12¼; Wheal Jane, 1⅜ to 1½; Wheal Peevor, 12½ to 13; Wheal Prussia, 1¼ to 1¾; Wheal Uny, 4 to 4⅛; West Providence, 1¾ to 1⅝; West Tolgus, 25 to 30.

— Mr. M. W. BAWDEN, Liskeard (Dec. 1), writes:—The mining market remains quiet, and most shares are offered at lower rates with an absence of buyers. The satisfactory result of the Banca sale and belief of higher prices for tin in reserve does not seem to improve the general aspect of business. The intervening settlement has temporarily suspended fresh transactions. Subjoined are the closing prices:—Bedford United, 1⅜ to 1½; Carn Brea, 25½ to 26; Cook's Kitchen, 27 to 27½; Dolcoath, 91 to 91½; Devon Consols, 7 to 7¼; East Caradon, ⅝ to ¾; East Herodsfoot, 1 to 1¼; East Lovell, 3 to 3¼; East Pool, 43½ to 44; Gawton United, ¾ to ⅞; Glasgow Caradon, ¾ to ⅞; Gunnislake (Clitters), 3½ to 3¾; Herodsfoot, ½ to ⅝, c. p; Hingston Down, 1¼ to 1⅜; Marke Valley, 1¾ to 1⅞; Mount Carbis, 3 to 3¼; New West Caradon, ⅜ to ½; North Herodsfoot, ½ to ⅝; Old Gunnislake, ⅜ to ½; Phœnix United, 3¾ to 4; Prince of Wales, ½ to ⅝; South Caradon, 40 to 41; South Condurrow, 11½ to 12; South Crofty, 10 to 10½; South Devon United, 1¾ to 2; South Frances, 16 to 16½; Tincroft, 18 to 18½; West Basset, 14¼ to 15; West Caradon, ¾ to ⅞; West Mary Ann, 1 to 1⅛; West Peevor, 14 to 14½; West Phœnix, 1 to 1⅛; Wheal Agar, 14¾ to 15; Wheal Basset, 5¾ to 6; Wheal Crebor, 3 to 3⅛; West Tolgus, 24½ to 25; Wheal Grenville, 12½ to 13; Wheal Hony and Trelawny, 2⅛ to 2¾; Wheal Jane, 1⅜ to 1¾; Wheal Peevor, 12 to 12¼, x. d.; Wheal Uny, 4¼ to 4⅜. At Herodsfoot meeting held in London on Friday last there showed a balance against the mine of 2632*l.* 4*s.* 6*d.* on six months working; a call of 3*s.* per 12,000th share was made.

— Mr. JOHN CARTER, mine sharedealer, Camborne (Dec. 1), writes:—The share market has been very quiet during the week, and without much change to notice. The settlement is a heavy one, and not yet completed. Dolcoaths, East Pools, Carn Breas, South Frances, Tincrofts, West Frances, Cook's Kitchens, Grenvilles, and South Croftys, are offered at lower prices. Closing prices annexed:—Carn Brea, 25½ to 26; Cook's Kitchen, 25 to 26; Dolcoath, 89½ to 90¼; East Pool, 43½ to 44; East Blue Hills, ⅛ to ⅜; Killifreth, 1½ to 1⅝; Mellanear, 4½ to 4¾; New Cook's Kitchen, 4½ to 4¾; New Kitty, 1¾ to 2; North Busy, ⅝ to ¾; Pedn-an-drea, 3⅜ to 3⅝; South Caradon, 45 to 50; South Condurrow, 11½ to 11¾; South Crofty, 9½ to 10; South Frances, 16⅞ to 17⅛; Tincroft, 18½ to 19; West Basset, 14 to 14½; West Frances, 18¼ to 18¾; West Peevor, 14 to 14½; West Poldice, 6 to 6¼; West Seton, 14 to 15; West Tolgus, 25 to 27½; Wheal Agar, 14¾ to 15¼; Wheal Basset, 5¾ to 5⅝; Wheal Grenville, 12 to 12¼; Wheal Hony, 2 to 2⅛; Wheal Jane, 1⅜ to 1¾; Wheal Jewell, ⅝ to ¾; Wheal Uny, 3⅝ to 3⅞; West Kitty, 8⅞ to 9⅛.

MANCHESTER.—Messrs. JOSEPH R. and W. P. BAINES, sharebrokers 13, Queen's Chambers, Market-street (Dec. 1), write:—The prospects of, and varying possibilities of the money market, have exercised an all-important influence on the movements in purely speculative stocks, but a fair business has been transacted, operators appearing to view with equanimity the future as it affects values, believing that should trade requirements harden rates for money the improvement in traffics and general prosperity is most likely to counterbalance any adverse effect the former influence is likely to have. In the markets for commercial undertakings th

changes, taking classes by themselves, are irregular, but on the whole a fairly steady tone prevails, but with much less actual business passing than has been the case during some few weeks last past.

Banks.—The number of transactions is meagre, but where done prices obtained are fully up to, and in some cases, a small advance of best lately realised. Although not active in dealings figures show a good feeling to exist, as quotations showing no instance of decline, whilst National Provincial, new, are ½; Bank of Liverpool, ⅛; Manchester and Liverpool District, ⅛; and Consolidated, 1/16 better.

Insurance.—This market has been a very neglected one during the past week, and with few transactions marked balance of movements is again unfavourable. Liverpool and London and Globe are ⅛ higher, but Queens are 3/16, Royal (Liverpool) ⅛, and Lancashire and Yorkshire Accident 1/16 lower.

Coal, Iron, &c., and Mining.—The lull herein continues; that is, so far as business done is concerned; and, indeed, also as regards the all-round upward movement, quotations showing change exhibiting adverse alterations to an extent bearing a nearer proportion to the enhanced figures than they have done for some little time now. Nevertheless, the favourable movements are in majority both in number and in extent. Ebbw Vales and Bolckows divide the chief share of transactions, and in these steadily advancing quotations have been marked. Prices of the former show latest rather under top mark, but the latter maintain the best. Llynvi and Tondu ordinary have receded ⅝, Tredegar (B), ¾, and A. Knowles and Sons ¼. All of these, however, have recently made rapid upwards strides, and on quietening down some relapse is not to be wondered at. The chief instances of rise are Nant-y-Glo and Blaina (pref.) 1½, Tharsis Sulphur and Copper 1½, Staveley (A) 1, Great Laxey Lead Mine ¾, and Ebbw Vale 11/16. In full the changes on comparison, besides those just mentioned, are:—Higher: United States Rolling Stock, ½; Bolckows (fully-paid), ¼; John Browns, ¼; Teeside Iron and Engine, ¼; West Cumberland, ⅛; Bilbao Iron, 1/16; Canadian Copper, 6d. lower.—Telegraph Consolidated and Maintenance, ¼; Tredegar, B, ¼; Llynvi, ordinary, ⅛; Cammells, ⅛; A. Knowles and Sons, ¼; and the Indian Gold Mines quoted here ⅛ each.

Cotton Spinning and Manufacturing.—This market has been dull during the whole of the week, and compared with late weeks the amount of business passing has been rather small, still figures have been maintained very fairly, as taken all round only a fractional falling off is to be noticed. Whilst there are some fresh instances of rise they are solitary, and generally speaking sellers predominate, though except in special cases very small concessions are made to bring about business. Buyers hold off somewhat, in the hope of inducing quotations more favourable to them, but the feeling of confidence in the future of these investments is in no degree weakened.—Telegraphs and Telephones have ruled weaker generally, and figures, with the exception of a rise of 3d. per share in Lancashire and Cheshire Telephones, are all lower.—Canals are unchanged, with a very trifling business done.—Corporation Stocks, &c.: Alterations are contradictory, Bradford being 1 higher and Blackburn 1¼ lower.—Miscellaneous: Fair business going on, and changes generally for the better. A strong demand has arisen for Crossleys, and enhanced figures are quoted. Shares of the Union Plate Glass and London and Manchester Plate Glass are strong, and figures are higher. Manchester Carriage and Trams Company exhibit a rise of 3/8, and Barlow and Jones, and Crosses and Winkworth, each exhibit improvement. The adverse changes are in Bodegas and Vin Santé, but in each case are not very severe.

Railways.—A very general advance is to be noticed from figures ruling a week ago, prominent amongst which are North British, which have risen on their good traffic. South-Eastern, too, after having been somewhat thrown back by the adverse award, recovered again, but failed to maintain best to-day. On the arrangement of the account being completed prices realised for the new time showed sharp advances, but to-day the Bank return announcing 4 per cent. down caused considerable weakness, and to-day's close is rather flat. Canadians have had rapid and severe fluctuations. To-day's figures show Trunks, ordinary, ⅜; first preference, ¼; and thirds ½ higher, whilst second preference are 3 down, and Great Western of Canada also 5/16 down. In Americans not much change to note.

Newcastle-on-Tyne.—Messrs. Spruce and Irwin, stock and share brokers, Grey-street (Dec. 1) write:—Our market continues quiet and firm. Barrow Hematite Steel shares are 124 to 125, and the Preference 10⅞ to 11⅛; Bede Metal shares are wanted at ⅛ dis., whilst there are sellers at par; Bolckow, Vaughan, and Co.'s 20*l.* paid shares are 29 to 29½; 12*l.* paid, 4½ to 4¾ prem.; and Five per cent. Preference, 21 to 21¼; C. Cammell and Co.'s shares are 7½ to 7 dis.; Consett Iron shares are wanted at 18½ prem., whilst sellers ask 19 prem.; Consett Spanish Ore shares are 32s. to 32s. 6d.; Wm. Clelland and Co.'s 3*l.* paid shares are 1½ dis. to par; John Abbot and Co.'s shares are 40 to 37 dis.; Palmer's Shipbuilding and Iron "A" shares are 28½ to 29, and "B" 5¼ to 5 dis.; Skerne Irons are 2¼ to 2⅛; Tees Side Iron and Engine Works ordinary shares are 1*l.* 17s. to 1*l.* 18s., and Preference ⅛ to ¼ prem.; Tyne Forge shares are largely wanted at 1 prem., whilst at present none are offered; West Cumberland Iron and Steel shares are wanted at 6 dis., sellers at 5½ dis.; Wear Rolling Mill shares are 2½ to 2 dis.

Tharsis Sulphur and Copper, 44⅞ to 45½; Crook Burn Mine shares are offered at ¼ dis.; no buyers. Dubby Syke Mine shares are offered at 3s.; no buyers. Gree Hurth Mine shares have been done at 7, and are still offered at that price, whilst 6¼ is best bid. Hexham and Edmondbyer's Mine shares are 15s. to 21s.; North Green Hurth Mine shares are in very good demand; the 1*l.* paid shares are 1⅞ to 2, and 2s. 6d. paid shares ¾ to ⅞ prem.

SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

Stirling.—Mr. J. Grant Maclean, sharebroker and ironbroker (Dec. 1), writes:—During the past week the market has been firm, and prices are again higher, owing to the encouraging appearance and prospects of trade.

In shares of coal, iron, and steel companies the movements for the week comprise advances of 1*l.* 5s. per share on Nantyglo and Blaina (preferred), 10s. on Ebbw Vale, 7s. 6d. on Marbella, 5s. on Bolckow, Vaughan, 2s. 6d. on Scottish Australian and Steel Company of Scotland, and about 1s. 3d. each on Bolckow Vaughan (12*l.* paid) and Scottish Australian (new); but Clyde Coal have declined 5s. 6d. per share. In the Scotch pig-iron market the price of warrants has advanced from 50s. 4½d. to 52s., owing to the favourable accounts of the home trade and rumoured orders on American account. The wages question is still undecided. Benhar Coal are at 10s. to 11s.; Bolckow, Vaughan, 29⅝ to 29½; Cardiff and Swansea Coal, 45s. to 55s.; Chatterley Iron, 3 to 9; Chillington Iron, 65s. to 70s.; Clyde Coal declined from 66s. to 52s., but are now about 60s.; Ebbw Vale, 11¾ to 12; John Bagnall and Sons, 6s. 3d.; Llynvi and Tondu, 9 to 9½; ditto, pref., 5s. to 2s. 6d. dis.; ditto, full paid, 80s. to 90s.; Marbella Iron declined from 5*l.* 13s. 9d. to 98s. 6d., but are now firmer at 5⅛; Mwyndy Iron, 32s. 6d. to 37s. 6d.; Nant-y-Glo and Blaina, pref., 39 to 39½; Steel Company of Scotland, 9 to 9⅛; Teeside, pref., 37s. 6d. to 42s. 6d., and West Cumberland, 6¼ to 5¾ dis.

In shares of foreign copper concerns prices are also better. Tharsis have improved 1*l.* 7s. 6d. per share; ditto, new, 12s. 6d.; Yorke Pennisula, pref., 6s. 3d.; Rio Tinto, 5s.; and Canadian, 1s.; but Huntington are 1s. lower. The advance in Yorke Peninsula (pref.) is owing to the report for last year showing a profit of 3360*l.*, which as soon as realised will enable one year's dividend at 15 per cent. to be paid on the preference shares carrying over 140*l.* Tharsis advanced from 44½ to 46¼, and are now about 46; Bratsberg, 35s. to 40s.; Canadian, 34s. to 36s.; Huntington, 45s. to 47s.; Norway Copper (pref.), par; and Panulcillo, 5⅛ to 6.

In shares of home mines business has been quiet, but prices of tin shares remain steady. Glasgow Caradon are steady at 23s. to 24s., and they have now called up the 5s. on the new shares, but this will not bring in 2000*l.* of capital. Bell Vean, are at 32s. 6d.; Carnarvon Copper, 12s. 6d. to 15s.; Carn Camborne, 10s. to 15s.; Devon Friendship, 15s. to 17s. 6d.; East Craven Moor, 5s. to 10s.; East Wheal Uny, 25s. to 30s.; East Devon Consols, 30s.; East Caradon, 7s. 6d. to 12s. 6d.; East Wheal Rose, par; East Roman Gravels, 12s. 6d. to 15s.; Grogwinion, 27s. 6d.; Goodevere, 1s. 3d. dis.; Indian Queens, 5s. to 7s. 6d.; Mounts Bay, 5s. dis.; New Wye Valley, 15s. to 17s. 6d.; North Herodsfoot, 7s. 6d. to 10s.; Old Shepherds, 6s. 3d. dis.; Parka Consols, 5s.; Pioneer, 15s. to 20s.; Penhale and Barton, 20s.; Parys Copper, 15s. to 17s. 6d.; Pen-y-Orsedd, 15s. to 17s. 6d.; Silver Hill, 2s. 6d. dis.; Tamar, 17s. 6d. to 22s. 6d.; Trevince Consols, 15s. to 20s.; Tin Hills, 10s. to 15s.; Tresavean, 1s. 6d.; United Shepherds Wheal Rose, 7s. 6d. dis.; West Crebor, 7s. to 9s.; West Chiverton, 2s. 6d. to 5s.; West Kitty, 8⅞ to 9⅛; West Holway, 20s. to 30s.; Wheal Basset, 5¼; Wheal Fortune, 15s. to 25s.; Wheal Jane, 25s. to 30s.; Wheal Lusky, 5s. 6d.; and Wheal Union, 15s. to 25s.

In shares of gold and silver mines there is no particular change in prices to notice. Richmonds have declined from 16½ to 15⅞. Akankoos are at 2s. 6d. to 5s.; Brrzilian, 20s. to 25s.; Central Wynaad, 12s. 6d. to 17s. 6d.; Cedar Creek, 1s. 3d. to 3s. 9d.; Chontales, 2s. to 4s.; Effuenta, 20s. prem.; Eureka (Nevada), 23s.; Exchequer, 1s. 3d. to 3s. 9d.; Frontino, 72s. 6d. to 77s. 6d.; Gold Coast, 27s. 6d. to 30s.; Indian Kingston, 10s. to 15s.; Indian Phœnix, 17s. 6d. to 20s.; Indian Trevelyan, 18s. 2d. to 20s.; I.X.L., 1s. 3d. to 3s. 9d.; La Plata, 45s.; New Gold Run, 4s. to 6s.; New Zealand Kapangas, 13s. 9d.; New Callao, 2s. 6d. dis.; Quartz Hill, 12s. 6d. to 17s. 9d.; Rhodes Reef, 13s. 9d. to 16s. 3d.; Simon's Reef, 12s. 6d. to 15s.; and ditto (debentures(, 10.

In shares of oil and miscellaneous companies the movements for the week comprises advances of 8s. 9d. per share on Burntisland Oil, 5s. on Walkinshaw Oil, 3s. 9d. on Scottish Wagon, 2s. 6d. each on Oakbank Oil and Uphall Oil, and 1s. on Oakbank Oil (new), but Broxburn Oil have declined 21s. 3d. per share, and Young's Paraffin 3s. 9d. Uphall Oils have been sold from 9 to 9¾. Dividends are payable of 9d. per share on Oakbank on Dec. 9, 21s. 3d. per share on Broxburn Oil on Dec. 14, 1s. 9d. per share on Uphall Oils on Dec. 15, and 4s. 3d. per share on Young's Paraffin on Dec. 23. Lawes' Chemical are at 5 to 5½; Montrose Slate Quarries, 10; Milner's Safe, 10; and Price's Candles, 8 to 8½.

Walkinshaw Oil Company.—The first report of this company being from Nov. 11, 1880, to Sept. 13, 1881, states the stock had all been entered at low valuations, and depreciation provided for as well as a dividend equal to 5 per cent. per annum. Considerable progress has been made with opening up the shale minerals at Walkinshaw, as well as with the construction of the manufacturies. A beginning has been made in the manufacture of oil, and the whole works are expected to be in full operation by Jan. 1.

On Contango-day (Monday) the following were the rates of continuation current.—Contangos: 1d. on Benhar Coal; 2d., 1½d. on Canadian Copper; 3d., 2d., 1½d. on Clyde Coal; 3d. on Devala Moyar; 1s. on Ebbw Vale; 2d., 1½d., 3d. on Caradon; 2d., 1d. on Huntington; 4d., 3d., 2d., 3d. 2½d., 3d. on Marbella; 1½d., 2d. on Omoa; 7½d. on Panulcillo; 6d. on Rio Tinto; 8d. on Steel Company; 2s. 6d., 2s. 9d., on Tharsis; 2s. on New; 4d. on Uphall; 9d., 8d. on Paraffin; even on Broxburn, Walkinshaw. On comparing the making-up prices fixed to day for the undermentioned shares with those current at last settlement for the same shares the variations thus shown to have taken place during the account are as follows:—Rio Tinto have advanced 50s. per share; Tharsis, and ditto (new), each 15s.; Walkinshaw, 10s.; Panulcillo, 6s. 3d.; Marbella and Young's Paraffin, each 5s.; Huntington and Broxburn Oil, each 2s. 6d.; Uphall Oil, 1s. 3d.; Canadian Copper and Oakbank Oil, each, 1s.; also ditto (new), 6d. On the other hand, Clyde Coal have declined 8s. per share; Omoa and Cleland, 2s. 6d.; Benhar Coal, 2s.; and Glasgow Caradon, 1s. The remainder are unaltered—Glasgow Caradon (new), Richmond, and Steel Company of Scotland.

Edinburgh.—Messrs. Thomas Miller and Sons, stock and share brokers, Princes-street (Dec. 1), write:—The market for home railway stocks has shown great strength during the past week. The greatest rise in ordinary stocks has been in North-Eastern, which has advanced from 168¼ to 172. Caledonian has risen from 108⅜ to 109¼, Glasgow and South-Western from 119⅞ to 122½, Great North of Scotland from 61¾ to 63¼, North British from 94½ to 96½, London and North-Western from 168½ to 170½, Midland from 139¾ to 141¼, Great Western from 135¼ to 136½. Preference, guaranteed, and debenture stocks have maintained previous prices. In Canadians Grand Trunk stocks have been very weak, owing to renewed speculative sales. The Third Preference stock has attracted most attention, it fell at one time from 36¾ to 34½, from which it rallied to 36¼, and after numerous fluctuations it closed to-day at 36. The First Preference has receded from 98½ to 97, the Second from 82½ to 79, and the Ordinary from 17 13/16 to 17 5/16. In banks Clydesdale has risen from 225 to 227, Commercial from 263 to 270, National from 281 to 285, British Livers from 281 to 283, Union from 220½ to 222. The publication of the Royal Bank's report has had no effect on the price of the stock, which remains at 211, cum dividend, payable this month. North British and Mercantile Insurance shares have risen from 62⅝ to 65¼, Standard Life from 70¼ to 71, Scottish Union and National, A, from 75s. 6d. to 77s. There has been no change in local gas or tramway shares. In mines Canadian Copper have risen from 33s. to 35s., Clyde Coal, after falling from 65s. 6d. to 53s., have recovered to 60s. Tharsis have improved from 44½ to 46. Burntisland Oil have advanced from 5 5/16, with 3*l.* paid, to 7¼, with 5*l.* paid. Prairie Cattle shares have risen from 12 to 14.

IRISH MINING AND MISCELLANEOUS COMPANIES' SHARE MARKET.

Dublin, Dec. 1.—Mines have been a trifle firmer, Wicklow Copper rallying 6d., to 15s. 6d. Early in the week they were very strong, and from 14s. advanced to 16s. 9d.; but subsequently they dropped off to 15s., ultimately rallying to 15s. 6d., and are thus 1s. 6d. higher on the week. Berehavens have not varied from 6s. 9d. Killaloe Slates at 8s. marked an advance of 6d. The railway market generally has been heavy. Belfast and County Down, however, have been good, and mark an advance of 17s. 6d. Belfast and Northern Counties have also been in request, and are 20s. higher. Great Southern has been dull and drooping, and has fallen 1 per cent. to 110, and Midland Great Western has given way 15s., to 83¼. Great Northern has been fairly steady, and at 117¼ is unaltered, although 5s. lower was marked. Dublin and Wicklow, at 77, is also unchanged.

Cork.—Messrs. J. H. Carroll and Sons, stock and share brokers, South Mall (Nov. 30), write:—Markets were dull to-day, and Great Southern declined to 110; Midlands are also low at 81½ to 82, and Bandons at 86: no change in Macrooms. National Banks changed hands at 7 3-16ths to 7¼; Hibernians were also done at 41⅛, and Provincials at 56¾. Cork Steampackets remain at 11 to 11⅛, and Dalys 3¼. Lyons fully paid were done at 6; Gas shares at 6½; Gouldings remain 8¾. Brewery shares were asked for at 4¾.

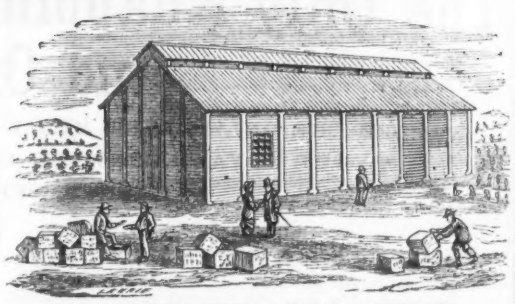
The Prospects of Mining.—In announcing his change of address to Clydesdale Bank Buildings, Carlisle, Mr. David Burns, C.E., F.G.S., late of H.M. Geological Survey, remarks that at no previous period in history has mining formed such a large factor in the wealth and status of this country. It is daily absorbing additional capital from those who do not follow mining as a business, and who make no profession of being technically acquainted with its methods, or with the merits of any particular venture. The pitfalls that await those who thus leap in the dark are becoming more and more numerous and skilfully devised, and the services of the independent engineer, who can investigate the merits of any project and advise intending investors, are becoming correspondingly valuable. As Mr. Burns has during the last 16 years devoted himself to general engineering, geological surveying in the principal coal and metalliferous districts of the North of England, and latterly to mining in many parts in connection with these sciences and with mine administration, he not unnaturally claims that he is able to offer valuable services as a mining and consulting engineer and geological and miner a surveyor.

HOLLOWAY'S PILLS.—The stomach and its troubles cause more discomfort and bring more unhappiness than is commonly supposed. The thousand ills that settle there may be prevented or dislodged by the judicious use of these purifying pills, which act as a sure gentle anti-acid aperient, without annoying the nerves of the most susceptible or irritating the most delicate organisation. Holloway's pills will bestow comfort and confer relief on every headache, dyspeptic, and sickly sufferer, whose tortures make him a burden to himself and a bugbear to his friends. These pills have long been the popular remedy for a weak stomach, for a disordered liver, or a paralysed digestion, which yield without difficulty to their regulation, purifying, and tonic qualities.

THE ERIMUS STEEL COMPANY.
POSTAL ADDRESS—MIDDLESBOROUGH.
MANUFACTURERS OF
STEEL MINE RAILS OF ALL CURRENT SECTIONS.

JOHN MARSDEN,
MANUFACTURER OF
Air Tubing and Improved Brattice Cloth,
Tarred, Oiled, and Non-Inflammable.
TRADE MARK
NEC TIMEO NEC SPERNO
THE OILED CLOTH IS ESPECIALLY RECOMMENDED FOR DAMP MINES, AND IS ALSO A GOOD COVERING FOR SHEDS.
THE NON-INFLAMMABLE FOR THE MORE DANGEROUS MINES.
Samples and prices free, on application at the Works,
VARLEY STREET, OLDHAM ROAD, MANCHESTER.
ALSO MANUFACTURER OF PACKING FOR ENGINES, PUMPS, &c., and STEAM HAMMER RINGS.

VENTILATING TUBES AND AIR VALVES FOR MINES.
TRADE MARK A STAR
Tubes.
TRADE MARK A STAR
GAS, STEAM, WATER, AND GALVANIZED TUBES AND FITTINGS, PATENT LAP-WELDED IRON, AND STEEL TUBES.
For Marine and Locomotive Boilers, Hand-rails, Ship Pillars, Coils, &c.
Tubes and Fittings for all Engineering Purposes.
TAUNTON and HAYWARD, Star Tube Works, Birmingham.

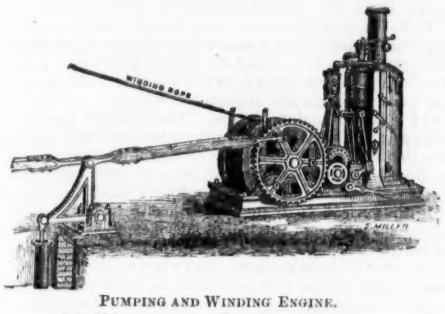
GALVANIZED IRON BUILDINGS AND IRON ROOFING.
MANUFACTURED BY
Messrs. HEMMING AND CO.,
OFFICE,—47, MOORGATE STREET, LONDON,
And EVERY DESCRIPTION OF IRON BUILDINGS adapted to all climates. GALVANISED IRON SHEETS of all sizes in stock.
N.B.—Messrs. HEMMING AND CO. have a SPECIALITY of CONSTRUCTION OF IRON BUILDINGS FOR THE INDIAN GOLD FIELDS. Established 1851
WORKS,—OLD FORD, LONDON

IRON STORES, WITH OR WITHOUT WINDOWS

GOLD MEDAL AWARDED, PARIS EXHIBITION, 1878.
THOMAS TURTON AND SONS,
MANUFACTURERS OF
MINING STEEL of every description.
CAST STEEL FOR TOOLS. CHISEL. SHEAR. BLISTER. & SPRING STEEL
MINING TOOLS & FILES of superior quality.
EDGE TOOLS, HAMMERS, PICKS, and all kinds of TOOLS for RAILWAYS, ENGINEERS, CONTRACTORS, and PLATELAYERS.
LOCOMOTIVE ENGINE, RAILWAY CARRIAGE and WAGON SPRINGS and BUFFERS.
SHEAF WORKS AND SPRING WORKS, SHEFFIELD.
LONDON OFFICES—90, CANNON STREET, E.C. PARIS DEPOT—12, RUE DES ARCHIVES. BOSTON MASS., U.S.—40, KILBY STREET.

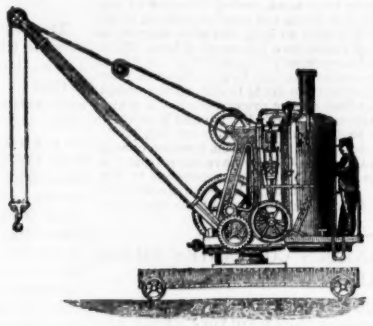
CHAPLINS' PATENT PORTABLE SETAM EEGINES AND BOILERS

PRIZE MEDAL, INTERNATIONAL EXHIBITION.

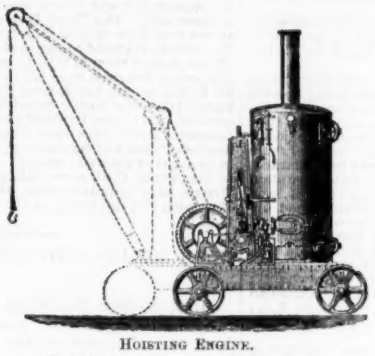
ALWAYS IN STOCK OR IN PROGRESS.



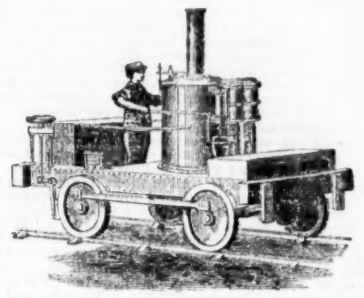
PUMPING AND WINDING ENGINE.
6 to 30 horse-power. Portable or Fixed.
With One or Two Drums, suited for Pit Sinking, &c.



STEAM CRANE.
Portable or Fixed, 1 to 20 tons.
For Wharf or Railway.



HOISTING ENGINE.
To hoist from 10 cwt. to 15 tons direct.
With or without Pillar and Jib.



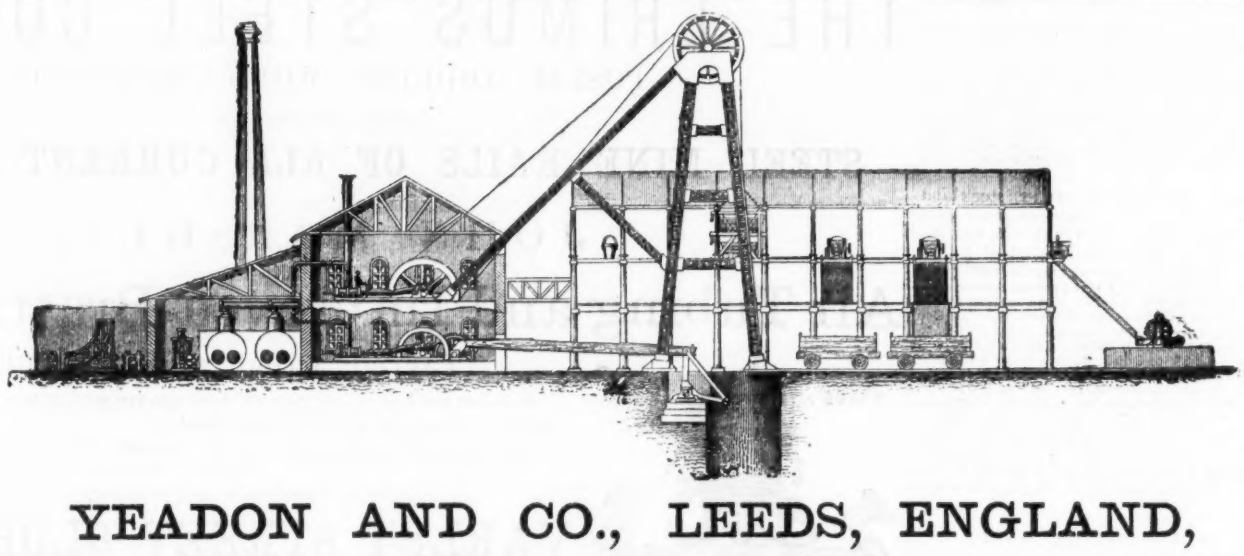
CONTRACTORS' LOCOMOTIVE.
9 to 21 horse-power. For Steep Inclines and Sharp Curves.
Gauge from about 2½ feet upwards.

CHAPLINS' STEAM NAVVIES, ROAD ROLLERS, DERRICK AND OVERHEAD CRANES, STATIONARY ENGINES, AND OTHER MACHINERY

ESTABLISHED 1849.

ALEX. CHAPLIN AND CO., Patentees and Sole Manufacturers, CRANSTONHILL ENGINE WORKS, GLASGOW.

Parties are cautioned against using or purchasing imitations or infringements of these Patent Manufactures.



YEADON AND CO., LEEDS, ENGLAND,

Engineers and Contractors for every description of Plant for Collieries, Mines, and Brickworks.

COLLIERIES.

WINDING, HAULING, AND PUMPING ENGINES; AIR COMPRESSORS; DIRECT-ACTING STEAM PUMPS; VENTILATING FANS; SEMI-PORTABLE BOILERS AND ENGINES COMBINED; PIT-HEAD PULLEYS; WIRE ROPES; WROUGHT-IRON HEAD GEAR, CAGES, and SCREENS; BOILERS; PATENT DETACHING HOOKS; COAL WASHING MACHINES; STEAM HAMMERS; STEAM CAPSTANS; PUMPS; VALVES. PATENT BRIQUETTE MACHINES (for Compressed Fuel).

MINES

CORNISH CRUSHERS and STAMPING MILLS; WATER WHEELS; REVOLVING and OTHER SCREENS; BLAKE'S ORE CRUSHERS; JIGGERS BUDDLES; ORE-WASHING MACHINES; GRINDING and AMALGAMATING PANS; WELL-BORING MACHINERY; WIRE TRAMWAYS.

BRICKWORKS.

PATENT BRICK MACHINES for DRY, SEMI-DRY, and PLASTIC CLAY; WET and PERFORATED CLAY GRINDING PANS; CLAY ROLLS PUG MILLS; MORTAR MILLS; FRICTION HOISTS; PIPE-MAKING MACHINES; BRICK PRESSES; PATENT KILNS.

PLANS, SPECIFICATIONS, AND ESTIMATES FOR COMPLETE PLANTS ON APPLICATION.

BEST DESIGNS, WORKMANSHIP, and MATERIAL THROUGHOUT.

N.B.—Experienced workmen sent out, if required, to Erect or Manage. Considerable Saving in Prices by dealing direct with us, having for many years been chiefly engaged in the manufacture of Colliery, Mining, and Brickmaking Plants.

The Only Knapping Motion Stone Breaker and Ore Crusher.

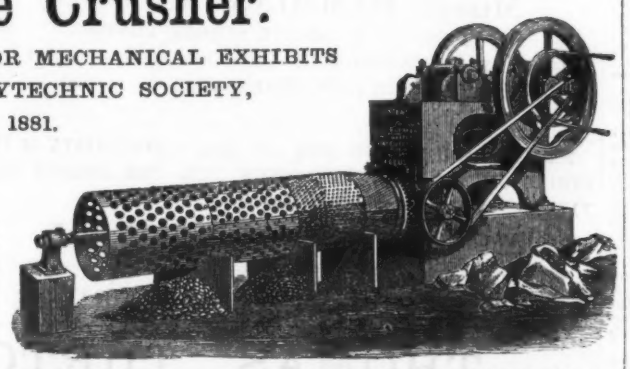
AWARDED THE ONLY SILVER MEDAL FOR MECHANICAL EXHIBITS AT THE ROYAL CORNWALL POLYTECHNIC SOCIETY, FALMOUTH, SEPT., 1881.

READ THIS—

The Bold Venture Lime and Stone Co., Peak Forest,
Messrs. W. H. Baxter and Co., *June* 8, 1881.

GENTLEMEN,—We have the pleasure to inform you that the 20 by 9 Stone Breaker supplied by you is now working to our entire satisfaction, and we are now able to fulfil our contract with ease, which we had much difficulty in doing before with the Blake Machine. It takes less power and turns out considerably more stone.

Yours truly,
BOLD VENTURE LIME AND STONE COMPANY.



These Machines turn out the same amount of work with less than half the power, and make a better sample of Road Metal, with 50 per cent. less waste, than any other machinery, and for Crushing Purposes they are still more advantageous, as the sudden action entirely dispenses with the clogging when used for crushing softer materials, and thereby saves many breakages and a great waste of power. There is also a saving of fully 75 per cent. of lubrication required over the Blake Machine, and as a proof of this, our driving shaft never becomes heated. We are also prepared to guarantee our driving shaft from breakage in any of our Knapping Motion Stone Breakers.

We have already supplied our Machines to Derby, Harrogate, and Falmouth Local Authorities; besides several Quarry Owners, Contractors, Plaster Manufacturers, &c.

FOR FULL PARTICULARS ADDRESS TO THE PATENTEES AND SOLE MAKERS,

W. H. BAXTER & CO., ALBION STREET, LEEDS.

HEPBURNS' PUMP LEATHER WATERPROOF

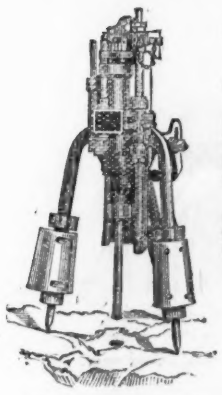
By a specia method of preparation this leather is made solid, perfectly close in texture and impermeable to water; it has, therefore, all the qualifications essential for pump buckets, and is the most durable material of which they can be made. It may be had of all dealers in leather, and of—

HEPBURN AND GALE,
TANNERS AND CURRIERS,
LEATHER MILL BAND AND HOSE PIPE MANUFACTURERS
LONG LANE, SOUTHWARK LONDON
Prize Medals, 1851, 1855, 1878, for
MILL BANDS, HOSE, AND LEATHER FOR MACHINERY PURPOSES.

ASSURANCE AGAINST ACCIDENTS OF ALL KINDS.
ASSURANCE AGAINST RAILWAY ACCIDENTS ALONE.
ASSURANCE AGAINST FATAL ACCIDENTS AT SEA
ASSURANCE OF EMPLOYERS' LIABILITY.

RAILWAY PASSENGERS ASSURANCE COMPANY
The oldest and largest Company, insuring against Accidents of all kinds.
The Right Hon. LORD KINNAIRD, Chairman.
SUBSCRIBED CAPITAL £1,000,000
PAID-UP CAPITAL AND RESERVE ... ... £230,000.
MODERATE PREMIUMS.
BONUS ALLOWED TO INSURERS AFTER FIVE YEARS.
£1,630,000
HAS BEEN PAID AS COMPENSATION.
Apply to the Clerks at the Railway Stations, the Local Agents, or
64, CORNHILL,
Or 8, Grand Hotel Buildings, Charing Cross, London.
WILLIAM J. VIAN, Secretary.

THE "BEAUMONT" PATENT PERCUSSIVE ROCK DRILL



(BEAUMONT AND FOSTER'S PATENT.

The "BEAUMONT" DRILL is now offered to the public.

For the last three years it has been solely used with complete success by the Aqueous Works and Diamond Rock Boring Company (Limited), and Messrs. Beaumont and Co in their several large contracts.

During this time it has been so improved and developed as to make it without doubt the best Percussive Rock Drill offered for Tunnelling, Mining, or Quarrying Work

Price and prospectus on application to e Manufacturer,—

JOSEPH FOSTER,
MINING ENGINEE
BOW LANE IRONWORKS
PRESTON, LANCASHIRE.

THE AQUEOUS WORKS AND DIAMOND ROCK-BORING COMPANY (LIMITED).
CROWN WORKS, GUILDFORD STREET, YORK ROAD
LAMBETH, LONDON.

MESSRS. BEAUMONT AND CO.,
3, VICTORIA STREET, S.W., WESTMINSTER, LONDON.

Tripods, Tunnelling Carriages, Gadding Cars, Air Compressors, Air Pipes, and other Mining Machinery supplied.

"KING AND HUMBLE'S" PATENT DETACHING HOOK

To prevent over winding

PATENT SAFETY CAGE,

To suspend in Shaft in cases of fracture of Winding Rope,

Winding and Hauling Engines,
Special Centrifugal Pumps,
Weighing Machines, Ore Crushers,
Steel Castings, Mining Steel and Tools,
Winches, Steel Shovels, Pulleys,
Mining Machinery of every description.
Brick Machinery and Mortar Mills.

Stephen Humble, Engineer, Derby.

W. F. STANLEY

MATHEMATICAL INSTRUMENT MANUFACTURER TO H.M.'S GOVERNMENT, COUNCIL OF INDIA, SCIENCE AND ART DEPARTMENT, ADMIRALTY, &c.

MATHEMATICAL, DRAWING, and SURVEYING INSTRUMENTS of every description, of the highest quality and finish, at the most moderate prices.

Price List post free.

ENGINE DIVIDER TO THE TRADE.

ADDRESS—GREAT TURNSTILE, HOLBORN, LONDON, W.C.

JOSEPH RICHARDS, M.E.,

te of the Devon Great Consols, England. Late Mineral Agent for the Earl Fortescue, England. Thirty-one years' experience; eleven years on the Pacific Coast.

JOHN TREGLOAN, M.E.,

Forty years' practical experience in England and the United States.

CONSULTING AGENTS AND ENGINEERS
TO
THE PACIFIC COAST MINE AGENCY AND MINING PROTECTIVE ASSOCIATION,
22, GEARY STREET (ROOM 11),
SAN FRANCISCO, CAL.

Mines examined (in any part of the World) and faithfully reported. The general Management of Mines undertaken.

TERMS FURNISHED ON APPLICATION.

Information given as to the status of any Mine on the Pacific Coast as soon after enquiry as possible. Fee for ordinary enquiry, Ten Guineas.

MINING ENGINEER.

ALEX. DEL MAR,

Mining Engineer, late Director of the United States Bureau of Statistics, Mining Commissioner for the United States Monetary Commission, &c., 216, SANSOME STREET, SAN FRANCISCO: Cable address—"Delmar, San Francisco." Branch Office, 61, Broadway, New York: Cable address—"Delmar, New York." London Agency, H. Stopes and Co., 24A, Southwark-street, S.E.: Cable address—"Delmar, London." Paris Agency, J. H. McDonald and Co., 13, Rue St. Lazare: Cable address—"Delmar, Paris."

MR. P. S. HAMILTON (late Chief Commissioner of Mines for the Province of Nova Scotia), PRACTICAL GEOLOGIST, MINING AGENT, and MINING ENGINEER, HALIFAX, NOVA SCOTIA.

PURCHASES and SALES of MINING PROPERTY effected, with careful regard to the interests of clients.

SOUTH AUSTRALIAN MINES.—J. B. AUSTIN, ADELAIDE (Author of "The Mines and Minerals of South Australia,") MINING AND GENERAL COMMISSION AGENT, has on hand several GOOD MINING PROPERTIES, in whole or in part—GOLD, SILVER, GALENA, COPPER, BISMUTH, ASBESTOS, MANGANESE, &c., &c.—offering good investment for English Capital.

References: A. L. ELDER, Esq., Bishopsgate-street; A. J. SCRUTTON, Esq., Stock Exchange; and Editor of the MINING JOURNAL, London.

68, HUNTER STREET, SYDNEY.

FRANCIS AND RICHARDS, CIVIL AND MINING ENGINEERS AND SURVEYORS.

Colonial Mining Properties, Metals or Minerals examined or reported on. Terms moderate.

References in England: Messrs. JOSEPH MATTHEWS and Co., Engineers and Ironfounders, Tavistock, Devon.

THE IRON AND COAL TRADES REVIEW.

The IRON AND COAL TRADES' REVIEW is extensively circulated amongst the Iron Producers, Manufacturers, and Consumers, Coalowners, &c., in all the iron and coal districts. It is, therefore, one of the leading organs for advertising every description of Iron Manufactures, Machinery, New Inventions, and all matters relating to the Iron Coal, Hardware, Engineering, and Metal Trades in general.

Offices of the Review: 7, Westminster Chambers, S.W.

Remittances payable to W. T. Pringle.

ESTABLISHED 1852.

SYBRY, SEARLS, AND CO.,

MANUFACTURERS OF THE

CELEBRATED MINING STEEL, BRANDED SSS

CAST STEEL, SHEAR, BLISTER, SPRING, HAMMER, AND PICK STEEL.

Special Rock Drill Steel.

Mining Tools, Files, Saws, Hammers, and Picks.

CANNON STEEL WORKS, SHEFFIELD.

FRANCIS MORTON AND CO., LIMITED, LIVERPOOL,

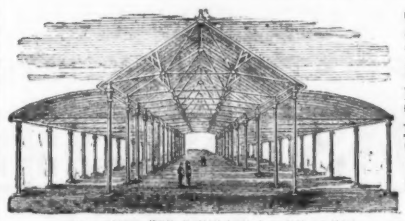
MANUFACTURERS OF

GALVANISED CORRUGATED IRON ROOFS, BUILDINGS, AND SHEDDING,

WHICH THEY HAVE EXTENSIVELY ERECTED FOR THE REQUIREMENTS OF

Forges, Rolling Mills, Puddling Sheds, Ironworks, and Collieries

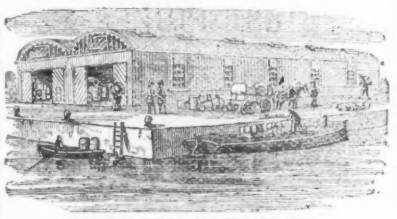
Erected Complete in this Country, or prepared to Plan for Erection Abroad.



OPEN SHED FOR COVERING LARGE AREAS.

GALVANISED OR PAINTED CORRUGATED IRON ROOFING PLATES and TILES. HEAVY CORRUGATED IRON PLATES for fireproof floors, roadways, parapets, &c. (for producing which F. M and Co. have recently laid down powerful Hydraulic Machinery). Wrought-iron Tanks, Guttering, and General Constructional Wrought Ironwork.

DESIGNS PREPARED, AND ILLUSTRATED DESCRIPTIVE CATALOGUES FORWARDED ON APPLICATION.



GENERAL STORE FOR WHARF, ETC.

London Office: 1, Delahay Street (first door out of Great George Street), Westminster, S.W.

S. & E. RANSOME & CO.,

ESSEX STREET, STRAND, LONDON,



Mining Institute First Silver Medal; also several from the Cornwall Polytechnic Institute.

Ransome's Artificial Free-grit Grindstones,

Solid and annular, possess extraordinary cutting powers.

IMPERISHABLE

"Damp Cure" for Bricks, Stone, Cement, Tiles, &c.



LIFTING JACKS, CRABS, PULLEYS,
BLAST FORGES, VICE BENCHES, &c. "RAPID" SELF-ACTING DRILLING MACHINES.

Steam Pumps, Engines, Gauges, Counters, &c.

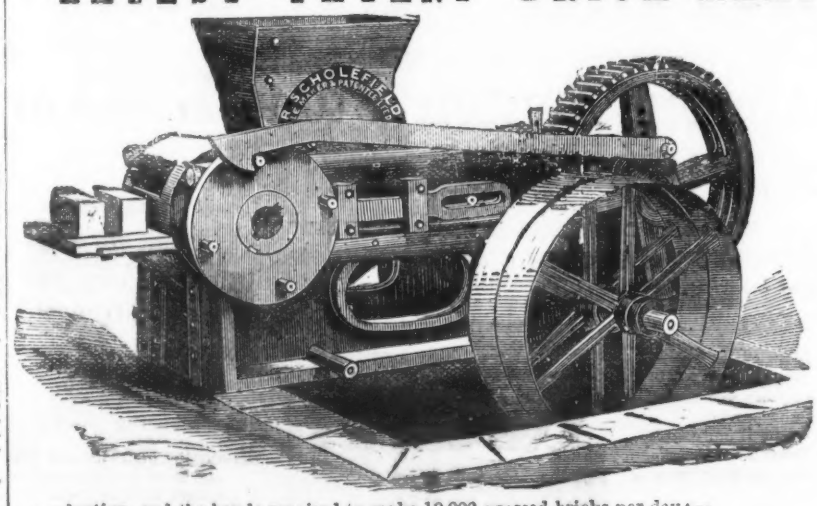
Weighing Machines for Minerals. Ventilators of best construction.

Crater Furnace Cement, £7 per ton. Vulcan Steam Cement.

Mills for Steam Jointing, Paint, Mortar, and other Purposes.

CATALOGUES OF ABOVE, AND OF VARIOUS OTHER TOOLS, &c, ON APPLICATION.

R. SCHOLEFIELD'S LATEST PATENT BRICK-MAKING MACHINE.



R. S. begs to call the attention of all Colliery Owners in particular to his PATENT SEMI-DRY BRICK MACHINE, and the economical method of making bricks by his patent machinery from the refuse that is taken from the pits during the process of coal-getting, which instead of storing at the pit's mouth (and making acres of valuable land useless) is at once made into bricks at a very small cost, by R. S.'s Patent Brick-making Machinery. If the material is got from the pit hill, the following is about the cost of production, and the hands required to make 10,000 pressed bricks per day:—

2 men digging, each 4s. per day	£0 8 0
1 man grinding, 4s. 6d. per day	0 4 6
1 boy taking off bricks from machine, and placing them in barrow ready for the kiln, 2s. per day	0 2 0
1 boy greasing, 1s. 6d. per day	0 1 6
1 engine-man, 5s. per day	0 5 0
1 man wheeling bricks from machine to kiln, 4s. per day	0 4 0
Total cost of making 10,000 pressed bricks	£1 5 0, or 2s. 6d. per 1000.

(SETTING AND BURNING SAME PRICE AS HAND-MADE BRICKS.)

N.B.—Where the material can be used as it comes from the pit, the cost will be reduced in digging.

As the above Machinery is particularly adapted for the using up of shale, bind, &c., it will be to the advantage of all Colliery Owners to adopt the use of the said Brick-making Machinery.

THE MACHINES CAN BE SEEN IN OPERATION AT THE WORKS OF THE SOLE MAKER AND PATENTEE DAILY.

SCHOLEFIELD'S ENGINEERING & PATENT BRICK MACHINE WORKS
KIRKSTAL ROAD LEEDS.

Copyright. All rights reserved.

Hadfield's Sheet of Drawings, No. 28.

HADFIELD'S STEEL FOUNDRY COMPANY.

ATTERCLIFFE, SHEFFIELD.

GOLD MEDAL.



Special Award, Paris, 1878.

OUR SOLE SPECIALITY IS

TRADE MARK **STEEL CASTINGS.** TRADE MARK

FROM 4 LBS. TO 16.000 LBS. EACH.

Contractors to H. M. Home, India, and Colonial Governments; Home, Foreign, and Colonial Railways; Admiralty, War Department, &c.

GOLD MEDAL.



Special Award, Melbourne, 1880.

FIRST PRIZES AT LEEDS AND MANCHESTER, 1875. FIRST PRIZES AT LEEDS AND CORNWALL, 1876.

X SPECIAL AND HIGHEST AWARD AT SYDNEY, 1879, DIPLOMA & MEDAL. X

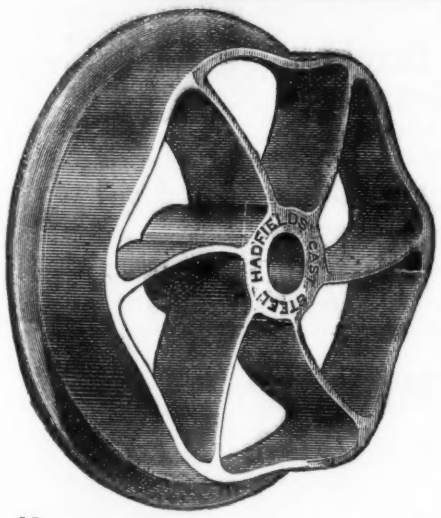
▷ HADFIELD'S CAST STEEL WHEELS. ◁

One of our departments is specially adapted for the production of our Patent Steel Wheels and Axles for Collieries, Tramways, Ironstone Mines, Slate Quarries, Ironworks, Lead Mines, &c., and we are now manufacturing 2000 per week. Owing to our patent system of fitting-up Wheels and Axles, which is simple but effective, we are enabled to execute orders with promptitude. We undertake to supply all work entrusted to us in a first-class manner, and only manufacture the BEST quality of material. Over 1100 DIFFERENT WHEEL, PULLEY, AND PEDESTAL PATTERNS IN STOCK, of varying widths of tread, flanges, &c., any of which can be ready for use at the shortest notice.

In addition to the now universally admitted superiority of Hadfield's Steel Wheels over those of Cast-iron for lightness, strength, and wearing qualities, we claim the following SPECIALITIES for our material over any other Steel, Malleable Iron, or other Wheels.

Extra TOUGHNESS or TENACITY, DURABILITY, and SOLIDITY; for proof of this kindly read the undermentioned.

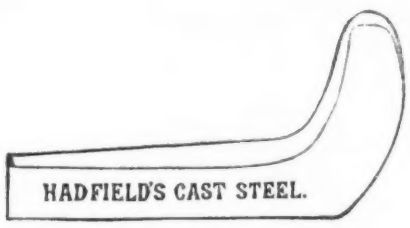
X TOUGHNESS



Special attention is drawn to the slight indendations produced by the numerous and heavy blows, thus bearing out our claims for producing a special tough and tenacious steel, which will not break or bend easily out of shape, and thus withstand the rough usage experienced at collieries, &c.

X This view represents one of Hadfield's Steel Wheels taken out of stock, bedded upon an anvil (thus getting full force of blow), then hammered COLD with no less than 45 swinging blows of a 14 lb. steel sledge hammer. We undertake that this same wheel, which may be seen at our Works, can be heated in a smith's fire, straightened, and put to use again; or, if desired, a piece therefrom drawn out into a chisel, knife, &c. This only represents an ordinary specimen of our manufacture.

DURABILITY



Section taken from a wheel kindly furnished by a customer who has many thousands at work. This wheel has run **41,000** miles, carried nearly **10,000** tons of coal, and although at work almost night and day for over five years, is only worn so slightly as shown above—viz., **one-eighth of an inch!** The wheels in question were 9 inches diameter, and weighed only 14 lbs. each when put to work. This is only one out of many similar examples of the extraordinary durability of our material

Prices **per set** furnished on receipt of sizes, either for wheels only or fitted together with Steel Axles by our well-known patent **fast** method. *When so fitted by us we undertake that our wheels shall remain* **fast** *as long as the wheels and axles last.* **Upwards** of *half-a-million* are now in daily use fitted by **Hadfield's patent fast method.** This is the only system that successfully withstands the great strains experienced in collieries, &c., without working loose.

NOTE.—Beware of spurious and cheap imitations, which eventually work loose, causing great loss and annoyance, as well as bringing discredit on the name of Steel Wheels and Axles. We are constantly replacing such. See, therefore, that Hadfield's name is on every Wheel.

We also solicit attention to the following articles, which, in addition to our well-known Patent Steel Wheels and Axles, we are now largely supplying in our CAST STEEL, on account of their great strength, combined with durability and lightness.

Rollers, Pulleys, Frames, and Stands.—See our Lists of over 160 different patterns. They possess great durability, lightness, and strength, and add considerably to the life of the steel or other ropes.

Self-oiling Wheels (Patent).—Many thousands now at work. Save at least 50 per cent. of oil or grease. Easily charged or re-filled. Reduce friction and wear and tear to a minimum.

Pedestals, Bushes, Cage Guides, Buffer Boxes, Points, Crossings, and other Colliery Castings of every description.

Over 1100 different patterns of above in stock, ready for use on the shortest notice. New patterns made to suit special requirements free of charge for quantities.

Steel Axles to suit all classes of haulage. We manufacture a special mild quality of steel suitable for this purpose, but have many *hundreds of thousands* in daily use, giving every satisfaction.

Steel Gearing of all kinds. Machine moulded, or from full patterns.

Miscellaneous Steel Castings, up to 16,000 lbs. each, to replace expensive wrought-iron and steel forgings and heavy iron castings. Tensile strain of our castings 34 to 40 tons per square inch, as tested by Government.

NOTE.—Beware of spurious and cheap imitations which eventually work loose, causing great loss and annoyance, as well as bringing discredit on the name of steel wheels and axles. We are constantly replacing such. See, therefore, that Hadfield's name is on every wheel.

N.B.—Note the Address, and prove truth of the above by giving our Steel Wheels, &c., a trial.

HADFIELD'S STEEL FOUNDRY COMPANY, HECLA WORKS, ATTERCLIFFE, SHEFFIELD.

Copyright. All rights reserved.

INFRINGEMENTS.—H. R. Marsden having obtained information of infringements of his numerous Patents, hereby gives notice that he will PROCEED AGAINST ANY ONE HE MAY DISCOVER MAKING OR USING THE SAME.

PARIS EXHIBITION, 1878. GAINED THE GRAND PRIZE. THE TRIPLE AWARD. Gold Medal, Silver Medal, and Honourable Mention in competition with all the World.

THE BLAKE-MARSDEN NEW PATENT IMPROVED STONE BREAKERS AND ORE CRUSHERS.

ORIGINAL PATENTEE AND ONLY MAKER.

H. R. MARSDEN,

ALSO PATENTEE AND ONLY MAKER OF THE

NEW PATENT FINE CRUSHER OR PULVERIZER,

FOR REDUCING TO AN IMPALPABLE POWDER, OR ANY DEGREE OF FINENESS REQUIRED,

GOLD AND SILVER QUARTZ, COPPER, TIN, ZINC, LEAD,

AND ORES OF EVERY DESCRIPTION;

Also Cement, Barytes, Limestone, Chalk, Pyrites, Coprolite, &c., &c. Several are already in successful operation in this country and abroad, and reference to users can be had on application.

NEW PATENT REVERSIBLE CUBING and CRUSHING JAWS, IN FOUR SECTIONS,
WITH PATENT FACED BACKS, REQUIRING NO WHITE METAL IN FIXING.

NEW PATENT TOGGLES.

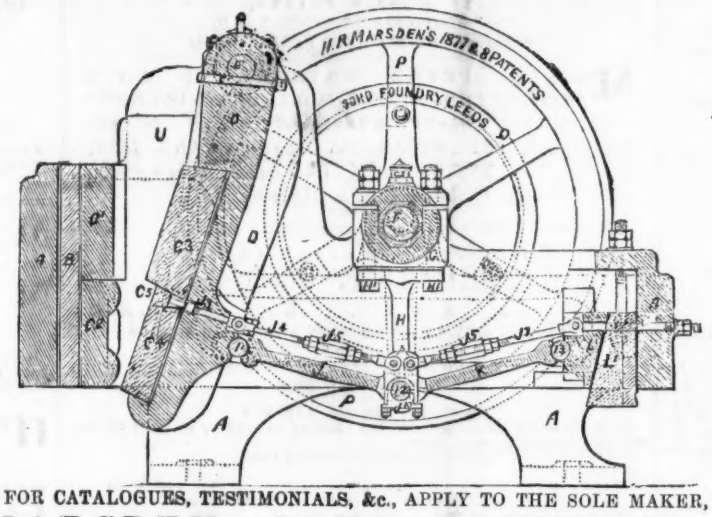
NEW PATENT CRUCIBLE CAST-STEEL CONNECTING RODS.
NEW PATENT WROUGHT-IRON CONNECTING RODS.
NEW PATENT RENEWABLE TOGGLE CUSHIONS, &c.

OVER **4000** IN USE.

EXTRACT FROM TESTIMONIALS.
PULVERISER.

"I have great pleasure in bearing testimony to the merits and capabilities of your patent combined fine crusher and sieving apparatus. I have tried it on a variety of ores and minerals, and it pulverizes them with equal success. You can put in a small paving stone, and bring it out like flour."

"The power required to drive it is very small, being from 4 to 5-horse, and the repairs are almost nil."



AWARDED OVER

60

FIRST-CLASS GOLD AND SILVER MEDALS.

ADOPTED BY THE PRINCIPAL CORPORATIONS, CONTRACTORS, MINING COMPANIES, &c., IN ALL PARTS OF THE WORLD.

ROAD METAL BROKEN EQUAL TO HAND, AT ONE-TENTH THE COST.

EXTRACTS FROM TESTIMONIALS.
STONEBREAKER.

"The 15 × 8 stonebreaker gives perfect satisfaction. It produces a more cubical stone than any others I have seen at work."

"Your 15 × 10 machine makes the best road metal I have ever seen put through a machine—in fact, comparing favourably with hand-broken."

"Your 10 × 7 crusher at the Aruba Gold Mines will crush 90 to 100 tons per 24 hours of the hardest gold quartz to 1 'size.'"

"Some of your testimonials do not give your machines half their due. I have seen men hammering away on a big rock for a quarter of a day which your machine would reduce to the required size in a quarter of a minute. I would guarantee that your largest size machine would reduce more of the Cornish tin capels (which is the hardest rock of England) in a day than 200 men, and at 1-25th the cost."

GREATLY REDUCED PRICES ON APPLICATION.

FOR CATALOGUES, TESTIMONIALS, &c., APPLY TO THE SOLE MAKER,

H. R. MARSDEN, SOHO FOUNDRY, LEEDS.

JOHN CAMERON'S

SPECIALITIES ARE HIS

STEAM PUMPS

FOR

COLLIERY PURPOSES,

Specially adapted for forcing Water any height;

ALSO, FOR

SINKING, FEEDING BOILERS AND STEAM FIRE ENGINES,

Of which he has made over 8000.

ALSO, HIS

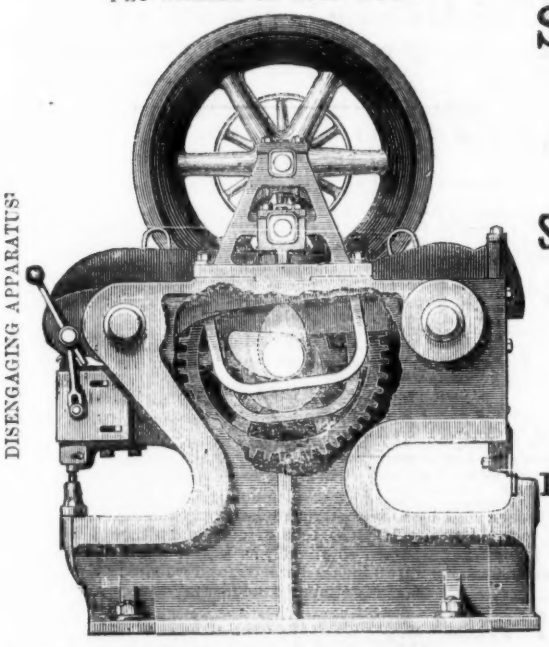
PATENT CAM AND LEVER

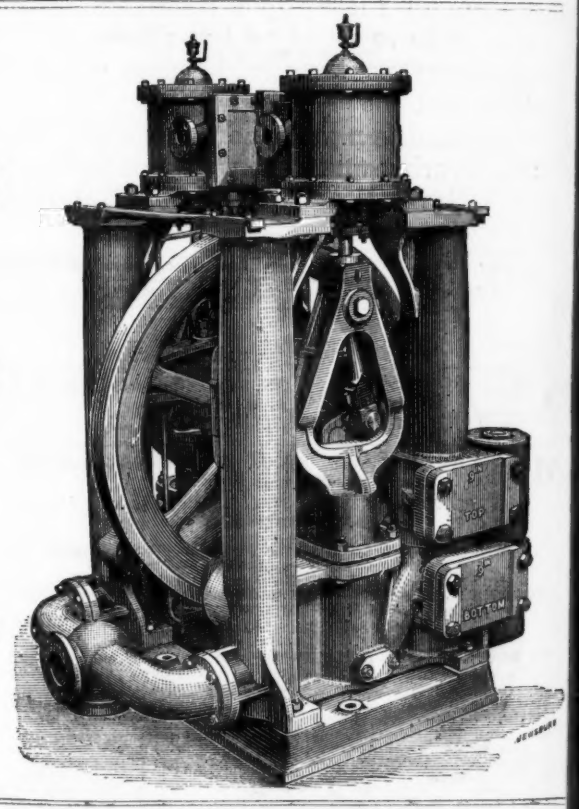
PUNCHING AND SHEARING MACHINES.

Works: Oldfield Road, Salford, Manchester.

FLY-WHEELS ON BOTH SIDES.

DISENGAGING APPARATUS.





HULME & LUNDS SPECIALITIES.
DONKEY PUMPS, MINING PUMPS,
HORIZONTAL PUMPS, TAR PUMPS,
AIR COMPRESSORS,
FIRE ENGINES, STEAM ENGINES.
WILBURN IRON WORKS
SALFORD, MANCHESTER.

MAPS OF THE MINES, AND OF UTAH TERRITORY

FROISETH'S NEW AND REVISED MAP FOR 1875,—Size 40 by 56 inches, scale 8 miles to the inch. Handsomely engraved, coloured in counties, showing the Towns, Settlements, Rivers, Lakes, Railroads, Mining Districts, &c., throughout the Territory, and all the Government Surveys to date. Mounted on cloth, £2; half-mounted, £1 12s.; pocket form, £1.

Also, GENERAL MINING MAP OF UTAH, showing twenty-eight of the principal Mining Districts adjacent to Salt Lake City, and location of the most prominent mines. Price, pocket form, 6s.

Also, NEW MAP OF LITTLE AND BIG COTTONWOOD MINING DISTRICTS showing the location of over Four Hundred Mines and Tunnel Sites, together with the Mines Surveyed for United States Patent. Price, sheets, 6s.; pocket form, 8s.

For sale, and supplied by—
Trubner and Co., 57 and 59 Ludgate Hill, London.
B. A. M. Froiseth, Salt Lake City, Utah, U.S..

Now ready, price 3s., by post 3s. 3d., Sixth Edition; Twentieth Thousand Copy, much improved, and enlarged to nearly 300 pages.

HOPTON'S CONVERSATIONS ON MINES, between Father and Son. The additions to the work are near 80 pages of useful information, principally questions and answers, with a view to assist applicants intending to pass an examination as mine managers, together with tables, rules of measurement, and other information on the moving and propelling power of ventilation, a subject which has caused so much controversy.

The following few testimonials, out of hundreds in Mr. Hopton's possession, speak to the value of the work:—

"The book canno fail to be well received by all connected with collieries."—*Mining Journa .*

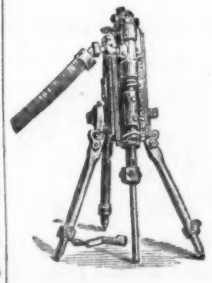
"The contents are really valuable to the miners of this country"—*Miners' Conference.*

"Such a work, well understood by miners, would do more to prevent colliery accidents than an army of inspectors."—*Colliery Guardian.*

London: Mining Journal Office, 26 Fleet-street, E.C., and to to had of all booksellers.

THE "CHAMPION" ROCK BORER

MINE AND QUARRY STANDS, STEEL DRILLS, SPECIALLY PREPARED INDIARUBBER HOSE, TESTED IRON PIPES, &c.



Air-Compressing Machinery,

Simple, strong, and giving most excellent results, and

ELECTRIC BLASTING APPARATUS.

Full particulars of rapid and economical work effected by this machinery, on application.

R. H. HARRIS, late
Mechanical and Consulting Engineers,
63, QUEEN VICTORIA STREET, LONDON, E.C.

ULLATHORNE AND CO.,

J. WOOD ASTON AND CO., STOURBRIDGE

(WORKS AND OFFICES ADJOINING CRADLEY STATION),
Manufacturers of

CRANE, INCLINE, AND PIT CHAINS,

Also CHAIN CABLES, ANCHORS, and RIGGING CHAINS, IRON and STEEL SHOVELS, SPADES, FORKS, ANVILS, VICES, SCYTHES, HAY and CHAFF KNIVES, PICKS, HAMMERS, NAILS, RAILWAY and MINING TOOLS, FRYING PANS, BOWLS, LADLES, &c., &c.

Crab Winches, Pulley and Snatch Blocks, Screw and Lifting Jacks, Ship Knees, Forgings, and Use Iron of all descriptions

WELDED STEEL CHAINS { FOR CRANES, INCLINES, MINES, &c., MADE ALL SIZES.

Printed by Richard Middleton, and published by Henry English (the proprietors) at their offices, 26, Fleet Street, where all communications are requested to be addressed.—*December 3, 1881.*